



888 Howard Street Hotel and Residential Project

2000.790E

City and County of San Francisco
Planning Department

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Draft EIR Publication Date: August 4, 2001

Draft EIR Public Hearing Date: September 6, 2001

Draft EIR Public Comment Period: August 4 – September 18, 2001

Written comments on this document should be sent to:

Paul E. Maltzer

Environmental Review Officer

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TO: Distribution List for the 888 Howard Street Hotel and Residential Project Draft EIR

FROM: Paul Maltzer, Environmental Review Officer

SUBJECT: Request for the Final Environmental Impact Report for the 888 Howard Street Hotel and Residential Project (Case Number 2000.790E)

This is the Draft of the Environmental Impact Report (EIR) for the 888 Howard Street Hotel and Residential Project. A public hearing will be held on the adequacy and accuracy of this document. After the public hearing, our office will prepare and publish a document titled "Summary of Comments and Responses" which will contain a summary of all relevant comments on this Draft EIR and our responses to those comments; it may also specify changes to this Draft EIR. Public agencies and members of the public who testify at the hearing on the Draft EIR will automatically receive a copy of the Comments and Responses document, along with notice of the date reserved for certification; others may receive such copies and notice on request or by visiting our office. This Draft EIR together with the Summary of Comments and Responses document will be considered by the City Planning Commission in an advertised public meeting and certified as a Final EIR if deemed adequate.

After certification, we will modify the Draft EIR as specified by the Comments and Responses document and print both documents in a single publication called the Final Environmental Impact Report. The Final EIR will add no new information to the combination of the two documents except to reproduce the certification resolution. It will simply provide the information in one rather than two documents. Therefore, if you receive a copy of the Comments and Responses document in addition to this copy of the Draft EIR, you will technically have a copy of the Final EIR.

We are aware that many people who receive the Draft EIR and Summary of Comments and Responses have no interest in receiving virtually the same information after the EIR has been certified. To avoid expending money and paper needlessly, we would like to send copies of the Final EIR to private individuals only if they request them.

If you would like a copy of the Final EIR, therefore, please fill out and mail the postcard provided inside the back cover to the Office of Environmental Review within two weeks after certification of the EIR. Any private party not requesting a Final EIR by that time will not be mailed a copy. Public agencies on the distribution list will automatically receive a copy of the Final EIR.

Thank you for your interest in this project.



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City and County of San Francisco
Planning Department

888 Howard Street Hotel and Residential Project

DRAFT ENVIRONMENTAL IMPACT REPORT

2000.790E

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888 Howard Street Hotel and Residential Project

Draft Environmental Impact Report

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I. SUMMARY

A. INTRODUCTION

This document is a Draft Environmental Impact Report (DEIR) prepared in accordance with the California Environmental Quality Act (CEQA) for the proposed removal of an existing parking lot at the northeast corner of Howard and Fifth Streets,¹ and the construction of a 39-story, approximately 400-foot-high building to contain hotel, residential and retail uses.

An application for environmental evaluation for the 888 Howard Street Mixed Use Project (the "Project") was filed on July 31, 2000. On the basis of the Initial Study published on January 20, 2001, the San Francisco Planning Department determined that an EIR is required. (See Appendix A– Initial Study.) This EIR is intended to provide information on the environmental effects concerning the proposed 888 Howard Street Mixed Use Project to allow the San Francisco Planning Commission to make an informed decision on the project.

B. PROJECT DESCRIPTION

The project site is a rectangular lot on the northeast corner of Fifth and Howard Streets in the South of Market area of San Francisco, and currently contains a surface parking lot with landscaping. The site is flat with a slight upward slope to the east. The project site is located in a C-3-S (Downtown Commercial Support) District and a 160-F Height and Bulk District.

The project sponsor, 888 Howard Street Associates, LLC, proposes to construct a 39-story hotel and residential building, about 400 feet tall, with approximately 630,000 square feet and two levels of below-

¹ Although Howard Street runs northeast to southwest, by convention it is described as east-west.

I. SUMMARY

grade parking. The existing parking lot would be removed. The hotel would be a full-service facility with approximately 500 rooms, an approximately 4,000 square-foot restaurant on the ground floor, about 1,000 square feet of retail use, and about 40,200 square feet of meeting and conference space. The fifth floor of the hotel would include a full-service health club and spa, with a 25-yard swimming pool. Above the hotel would be eleven floors of approximately 67 residential condominiums. The restaurant would be on the southwest corner of the building fronting Fifth and Howard Streets with the entrance on Howard Street. The retail space would front onto Fifth Street. Guests would enter the hotel via a porte cochere on Howard Street on the east side of the building, which would also accommodate loading for tourist buses. The proposed project would have about 67 parking spaces for the residential use, and approximately 61 independently accessible parking spaces or 100 valet parking spaces for the hotel. There would be a separate entrance on Fifth Street to the residential parking garage.

Following completion and certification of the Final EIR, the project would require the following approvals:

- Amendments to the San Francisco *General Plan* for the proposed height, bulk, Floor Area Ratio (FAR), and zoning designations of the site.
- The proposed change in the Height and Bulk District is from 160-F to 400-M.
- The proposed zoning change is from the existing C-3-S (Downtown Commercial Support) zoning designation to C-3-S (SU), Downtown Commercial Support with Special Use Overlay for Hotel and Residential, to allow for a 7.5:1 FAR for hotel uses and no FAR requirement for Residential uses and related subsurface parking for each use. (In the C-3-S zone, the allowable FAR is 5:1, or 7.5:1 with TDRs.).
- Planning Commission conditional use authorization for the hotel use.
- Planning Commission review as a project in a C-3 District under Section 309 of the City Planning Code including exceptions to the setback, rear yard and ground level wind current requirements.
- A Variance for the proposed residential parking.
- Department of Public Works approval for a lot split to create an individual parcel for the project from the existing lot that also includes the adjacent existing office, and the location of any street trees proposed to be planted.
- Planning Department approval of the building permit application.
- Department of Building Inspection approvals of demolition and building permits.

C. MAIN ENVIRONMENTAL EFFECTS

This environmental impact report for the 888 Howard Street Mixed Use Project focuses on the issues of visual quality and urban design, shadows, wind, transportation, and air quality. All other potential environmental effects were found to be at a less-than-significant level or to be mitigated to a less-than-significant level with mitigation measures to be implemented by the project sponsor. (Please see the Initial Study, included in this document as Appendix A, for analysis of other environmental issues.) In addition, this environmental impact report discusses land use, zoning, and general plan consistency for informational purposes, although these impacts were found to be less than significant in the Initial Study.

Land Use, Zoning and General Plan Consistency (page 31)

The project site is within a C-3-S (Downtown Commercial Support) District and a 160-F Height and Bulk District. The San Francisco *Planning Code* describes the C-3-S District as a district near the intensive downtown core areas accommodating supporting functions such as wholesaling, printing, building services, secondary office space and parking, as well as containing unique housing resources.

The project site is in the South of Market area, near the western border of the Yerba Buena Center (YBC) Redevelopment Area. The South of Market area east of the site and the YBC Redevelopment Area are occupied by office, commercial and hotel uses, along with museum and performing arts uses, including many recently-constructed and high-rise buildings. Further north of the site is the Financial District with high-rise office buildings up to 400 feet or more in height, many of relatively recent construction. The portion of the South of Market area to the south and west of the site is occupied primarily by two- to five-story buildings dating from the early part of the twentieth century, housing a mix of residential, hotel, retail, office, commercial, and light industrial uses.

Visual Quality and Urban Design (page 38)

The project site is in the southeast corner of the block bounded by Howard, Fifth, Fourth, and Minna Streets. The project vicinity is a mix of residential, office, commercial, retail, hotel, museum, performing arts, and light industrial uses. The area to the east and north of the site is characterized by a higher proportion of more recent buildings, many of them high-rises, including the Yerba Buena Center to the east

I. SUMMARY

and the downtown financial district to the north. In contrast, the area to the south and west of the project site is characterized by older two- to five-story buildings dating from the early part of the twentieth century. There are several high-rise buildings existing or under construction in the project vicinity that are as tall or taller than the proposed project.

The proposed project would be substantially higher than most surrounding buildings and would be visually prominent from many viewpoints, both near and distant. The proposed project's height and configuration would make it readily apparent from nearby locations such as Fifth and Folsom Streets (one block to the south), Market and Fifth Streets (two blocks to the north), and Howard and Fourth Streets (one block to the east). From more distant vantage points to the south, such as Highways 80 and 280 looking north, the proposed project would be readily visible as the highest building in its immediate vicinity, although it would be similar in visual character and height to other high-rise buildings in the existing downtown cityscape. From the distant vantage point of the Bay Bridge looking west, the upper portion of the building would be visible, but the proposed project would be less conspicuous than other structures in the downtown skyline.

The topography of the area surrounding the site is flat, and existing development limits views from streets and sidewalks. While the proposed project would be visible from various locations, possibly including some open spaces, the proposed project would not block any public view corridors. Views from public streets or private properties may be altered by the proposed construction, although this effect would be limited by the fact that the neighborhood is already densely developed.

As a result, it cannot be concluded that the proposed project would have demonstrable negative aesthetic effects on the character of the surrounding area, and thus, the proposed project would have a less than significant impact on urban design and visual quality.

Shadows and Wind (page 50)

Existing open space areas in the vicinity of the site include South of Market Park, Howard-Langton Mini-Park, Union Square, Boeddeker Park, Yerba Buena Gardens, and Hallidie Plaza.

City Planning Code Section 295, adopted in 1984 pursuant to voter approval of Proposition K, prohibits the issuance of building permits for structures over 40 feet in height that would shade property under the jurisdiction of, or designated to be acquired by, the Recreation and Park Commission.

Shadow patterns for existing, proposed, and approved buildings in the project area, plus the project, were created for representative times of the day (10:00 a.m., 12:00 p.m., and 3:00 p.m.) for the four seasons: during winter and summer solstices (December 21 and June 21), when the sun is at its lowest and highest, and during spring and fall equinoxes (March 21 and September 21), when the sun is at its midpoint.

On December 21, new shadow would cover portions of Minna and Mission Streets at 10:00 a.m. and noon, and would shade the north sidewalk of Howard Street between Third and Fifth Streets at 3:00 p.m. The proposed project would not shade any of the six open spaces at 10:00 a.m. and noon, but would cover the southernmost portion of Yerba Buena Gardens, consisting of a narrow strip that extends south to Howard Street from the main body of the Gardens (which would not be shaded at 3:00 p.m.). From the relative shadow patterns at noon and 3:00 p.m., it can be inferred that shadow would pass over Yerba Buena Gardens between these hours, shading a different swath of the Gardens at any one time. The proposed project would not shade any of the other open spaces at 3:00 p.m.

On March 21, new shadow would extend over a portion of Minna Street at 10:00 a.m., and a portion of Howard Street between Fourth and Fifth Streets at 3:00 p.m. On June 21, new shadow would extend over a portion of Fifth Street west of the project site at 10:00 a.m., and over a portion of Howard Street between Fourth and Fifth Streets at 3:00 p.m. For March 21 and June 21, no new shadows on streets or sidewalks would be created at noon, and none of the six open spaces would be shaded at 10:00 a.m., noon, or 3:00 p.m.

On September 21, new shadow would extend over portions of Fifth and Mission Streets at 10:00 a.m., over a portion of Minna Street at noon, and over a portion of the north sidewalk Howard Street between Fourth and Fifth Streets at 3:00 p.m. None of the six open spaces would be shaded at 10:00 a.m., noon, or 3:00 p.m.

I. SUMMARY

Because the proposed project would not shade any open space areas under the jurisdiction of the Recreation and Park Department, and would shade portions of Yerba Buena Gardens during limited periods of the year (winter afternoons), the shadow impact of the proposed project would be considered less than significant.

The greatest changes in wind speeds associated with the proposed project would be on the sidewalk at the south side of Howard Street where the wind speed would increase from 11 to 17 miles per hour, and at the southwest corner of the project site at the intersection of Fifth and Howard Streets where wind speeds would shift from 11 to 20 miles per hour. As with existing conditions, the proposed project would not cause exceedances of the 26 mph hazardous wind criterion with the required street trees. With cumulative development, wind would not exceed the 12 mph comfort criterion for pedestrian walking, but would exceed the 7 mph criterion for seating areas along Howard Street. However, with the added canopy and street landscaping along Fifth and Howard Streets, the proposed project's wind effects would be less than significant.

Transportation (page 64)

The transportation study performed for the proposed project reviewed conditions at eleven key intersections in the vicinity of the project site. Eight of the study intersections currently operate at acceptable levels of service (LOS D or better), while the intersections of Folsom/Fourth and Brannan/Sixth operate at LOS E, with average delays in excess of 40 seconds, and the intersection of Harrison/Fourth operates at LOS F, with average delays in excess of 60 seconds. In general, the poor operating conditions at the three intersections that operate at LOS E or F are due to the high volume of traffic destined to and from the regional freeway network (I-80/U.S. 101 eastbound and westbound and I-280 southbound).

The project as proposed is estimated to generate about 557 new weekday P.M. peak hour person-trips. Project-generated traffic would result in minor increases in the average delay per vehicle at the study intersections, and all intersections would continue to operate at the same service levels as under existing conditions, with the exceptions of Mission/Fifth and Howard/Sixth, which would worsen from LOS C to LOS D. At the three study intersections that currently operate at LOS E and F conditions, the proposed project would result in minor changes to the average delay per vehicle. Because the proposed project

would not cause the level of service at any of the intersections to deteriorate to LOS E or F, or to deteriorate from LOS E to LOS F or from LOS D to E or F, implementation of the proposed project would not create any significant impacts on traffic conditions in the study area under the existing plus project conditions.

The proposed project would generate about 244 new transit trips during the weekday P.M. peak hour. These transit trips would use nearby Muni lines and regional transit lines, and may include transfers to other Muni lines or other regional transit lines. The addition of the project-generated riders would not substantially increase the peak hour capacity utilization, or exceed the capacity utilization standards of Muni or the regional transit providers.

The proposed project would supply 100 (attendant) parking spaces for the proposed hotel component and 67 self-park spaces for the proposed residential units. In the C-3 District, the *Planning Code* requires the provision of off-street parking only for dwelling units, for which one space per four units would be required, or 18 total spaces. The proposed project would exceed this requirement. The proposed project would generate a total parking demand of 292 spaces, of which 181 spaces would be related to the hotel, 20 would be related to the retail/restaurant, and 91 would be related to the residential units. Overall, there would be a shortfall of 81 spaces for the hotel, 20 spaces for the retail/restaurant, and 12 spaces for the residential units. The proposed project would eliminate 100 parking spaces that currently exist on the site. The overall parking shortfall for the proposed project would be 213 spaces. There should be sufficient public parking in the nearby vicinity to accommodate the proposed project's parking demand. Neither the loading zone nor the parking demand of the proposed project are anticipated to substantially affect area-wide parking conditions.

The *Planning Code* would require the project to provide three off-street loading spaces, and the three proposed loading docks would fulfill this requirement. The proposed project would generate a demand for about 2.5 loading spaces during an average hour and about 3.0 spaces during the peak hour of loading activities. The three proposed loading docks would meet the anticipated demand.

Within the porte cochere, there would be space for between three and seven passenger vehicles. It is anticipated that there would be a demand for between 3.5 and 11.5 spaces for peak passenger loading/unloading and the temporary storage of vehicles for valet operations.

Project construction is expected to take about 25 months, with staging of most construction equipment and materials occurring within the project site and on the adjacent sidewalks on Fifth and Howard Streets. Throughout the construction period, there would be a flow of construction-related trucks into and out of the site. It is anticipated that the addition of worker-related vehicle or transit trips would not substantially affect the transportation conditions.

Under year 2015 cumulative conditions, ten of the eleven study intersections would operate at LOS E or F during the weekday P.M. peak hour. These poor conditions would be the direct result of the anticipated general growth in traffic volumes in the area. At these intersections, the proposed project would contribute 2.3 percent or less of the total 2015 cumulative traffic volumes. The proposed project would contribute considerably to the growth in cumulative volumes at two intersections – Howard/Fifth (14.7 percent) and Harrison/Fifth (5.5 percent) – which would be considered a significant cumulative impact. The proposed project would contribute 6.1 percent to the cumulative growth at Howard/Fourth, however, since most of the contribution would be to the non-critical direction, the effect would not be considered significant.

Air Quality (page 89)

Air quality impacts would result from project construction and operation. Construction emissions, primarily dust generated by earthmoving activities and criteria air pollutants emitted by construction vehicles, would have a short-term effect on air quality. Operational emissions, generated by project-related traffic and by combustion of natural gas for building space and water heating, would continue to affect air quality throughout the lifetime of the project. Transportation sources, such as project-generated vehicles, would account for over 90 percent of operational project-related emissions. Stationary source emissions would be less than significant.

Project-generated increases in regional emissions from auto travel of reactive hydrocarbons and oxides of nitrogen (two precursors of ozone), and PM₁₀ (particulate matter, 10 micron) could affect regional air

quality outside the project vicinity. Project-related emissions would be below the applicable thresholds, so project impacts on regional air emissions would be less than significant.

Predicted one-hour and eight-hour averaged carbon monoxide concentrations with project-generated traffic at the eight nearby intersections that meet the Bay Area Air Quality Management District criteria for modeling would be below the applicable state/federal standards and hence, a less-than-significant impact.

Growth Inducement (page 94)

The proposed replacement of an existing surface parking lot with a mixed use building containing hotel, residential, and retail uses would intensify the use of the site, but would not be expected to substantially alter development patterns in the South of Market area or elsewhere in San Francisco. The additional 1,271 daily population (consisting of employees, hotel guests, and residents) would not be large in relation to San Francisco's population, and would not represent a substantial population growth or concentration in the neighborhood, City, or region. The proposed project is located in an urban area and would not necessitate or induce the extension of municipal infrastructure, and there is no evidence to suggest that the proposed project would result in additional development in the project site vicinity that would not otherwise occur.

D. MITIGATION MEASURES (page 96)

Measures That Could Be Implemented by Public Agencies

A. TRANSPORTATION

The project sponsor has agreed to make a \$50,000 contribution to the Department of Parking and Traffic's Integrated Transportation Management System (ITMS) program. The new San Francisco ITMS program is a City-wide real-time electronic transportation management system that will install various Intelligent Transportation System (ITS) infrastructure components to improve traffic circulation within the City. The South of Market area would be the first phase of the system that would be implemented. This program will monitor and manage traffic by receiving real-time information at the Traffic Management Center via closed circuit TV cameras.

The implementation of the ITMS program will improve overall traffic conditions and reduce traffic congestion in the City. Although the implementation of ITMS may not directly mitigate the significant impacts of the proposed project under cumulative conditions, this program would result in overall traffic improvements and lessening of congestion, and would facilitate circulation in the South of Market area, where the proposed project is located.

Measures Proposed as Part of the Project

B. CONSTRUCTION AIR QUALITY

The project sponsor shall require the construction contractor(s) to spray the project site with water during excavation, grading, and site preparation activities; spray unpaved construction areas with water at least twice per day; cover stockpiles of soil, sand, and other such material; cover trucks hauling debris, soils, sand or other such material; and sweep surrounding streets during these periods at least once per day to reduce particulate emissions. Ordinance 175-91, passed by the Board of Supervisors on May 6, 1991, requires that non-potable water be used for dust control activities. Therefore, the project sponsor shall require the construction contractor(s) to obtain reclaimed water from the Clean Water Program for this purpose.

The project sponsor shall require the project contractor(s) to maintain and operate construction equipment so as to minimize exhaust emissions of particulates and other pollutants, by such means as prohibiting idling motors when equipment is not in use or when trucks are waiting in queues, and implementing specific maintenance programs to reduce emissions for equipment that would be in frequent use for much of the construction period.

C. HAZARDS

1. Underground Storage Tanks

The project sponsor shall conduct an Underground Storage Tank (UST) scan by magnetometer to determine if abandoned USTs or piping exist on the site. If any are found, they shall be removed in accordance with regulatory requirements, and surrounding soils shall be tested. Any soil found to be contaminated at or above potentially hazardous levels shall be handled and disposed in accordance with Mitigation Measure C2, below.

2. Contaminated Soil

Step 1: Preparation of Site Mitigation Plan

If, based on the results of the soil tests conducted, the San Francisco Department of Public Health (DPH) determines that the soils on the project site are contaminated with lead or other contaminants at or above potentially hazardous levels, the DPH shall determine if preparation of a Site Mitigation Plan (SMP) is warranted. If such a plan is requested by the DPH, the SMP shall include a discussion of the level of contamination of soils on the project site and mitigation measures for managing contaminated soils on the site, including, but not limited to: 1) the

alternatives for managing contaminated soils on the site (e.g., encapsulation, partial or complete removal, treatment, recycling for reuse, or a combination); 2) the preferred alternative for managing contaminated soils on the site and a brief justification; and 3) the specific practices to be used to handle, haul, and dispose of contaminated soils on the site. The SMP shall be submitted to the DPH for review and approval. A copy of the SMP shall be submitted to the Planning Department to become part of the case file.

Step 2: Handling, Hauling, and Disposal of Contaminated Soils

(a) specific work practices: If based on the results of the soil tests conducted, DPH determines that the soils on the project site are contaminated with lead or other contaminants at or above potentially hazardous levels, the construction contractor shall be alert for the presence of such soils during excavation and other construction activities on the site (detected through soil odor, color, and texture and results of on-site soil testing), and shall be prepared to handle, profile (i.e., characterize), and dispose of such soils appropriately (i.e., as dictated by local, state, and federal regulations, including OSHA lead-safe work practices) when such soils are encountered on the site.

(b) dust suppression: Soils exposed during excavation for site preparation and project construction activities shall be kept moist throughout the time they are exposed, both during and after work hours.

(c) surface water runoff control: Where soils are stockpiled, visqueen shall be used to create an impermeable liner, both beneath and on top of the soils, with a berm to contain any potential surface water runoff from the soil stockpiles during inclement weather.

(d) soils replacement: If necessary, clean fill or other suitable material(s) shall be used to bring portions of the project site, where contaminated soils have been excavated and removed, up to construction grade.

(e) hauling and disposal: Contaminated soils shall be hauled off the project site by waste hauling trucks appropriately certified with the State of California and adequately covered to prevent dispersion of the soils during transit, and shall be disposed of at a permitted hazardous waste disposal facility registered with the State of California.

Step 3: Preparation of Closure/Certification Report

After excavation and foundation construction activities are completed, the project sponsor shall prepare and submit a closure/certification report to DPH for review and approval. The closure/certification report shall include the mitigation measures in the SMP for handling and removing contaminated soils from the project site, whether the construction contractor modified any of these mitigation measures, and how and why the construction contractor modified those mitigation measures.

D. CULTURAL RESOURCES

The project sponsor shall retain the services of an archaeologist. During removal of structures, paving, and any buried foundation materials found on the site, the archaeologist shall carry out a pre-excavation testing program to better determine the probability of finding archaeological remains on the site. The testing program shall consist of a series of mechanical, exploratory borings or trenches and/or other testing methods determined to be appropriate by the archaeologist.

If, after testing, the archaeologist determines that no further investigations or precautions are necessary to safeguard potentially significant archaeological resources, the archaeologist shall submit a written report to the Environmental Review Officer (ERO), with a copy to the project sponsor. If the archaeologist determines that further investigations or precautions are necessary, he/she shall consult with the ERO, and they shall jointly determine what additional procedures are necessary to minimize potential effects on archaeological resources.

These additional mitigation measures shall be implemented by the project sponsor and might include a program of on-site monitoring of all pile driving and any site excavation that may be necessary, during which the archaeologist shall record observations in a permanent log. Whether or not there are archaeological finds of significance, the archaeologist shall prepare a written report on the monitoring program that shall be submitted first and directly to the ERO, with a copy to the project sponsor. During the monitoring program, the project sponsor shall designate one individual on site as her/her representative. This representative shall have the authority to suspend work at the site to give the archaeologist time to investigate and evaluate archaeological resources should they be encountered.

Should evidence of cultural resources of potential significance be found during the monitoring program, the archaeologist shall immediately notify the ERO, and the project sponsor shall halt any activities which the archaeologist and the ERO jointly determine could damage such cultural resources. Ground disturbing activities which might damage cultural resources would be suspected for a total maximum of four weeks over the course of construction.

After notifying the ERO, the archaeologist shall prepare a written report to be submitted first and directly to the ERO, with a copy to the project sponsor, which shall contain an assessment of the potential significance of the archaeological finds and recommendations for what measures should be implemented to minimize potential effects on archaeological resources. Based on this report, the ERO shall recommend specific additional mitigation measures to be implemented by the project sponsor. These additional mitigation measures might include a site security program, additional on-site investigations by the archaeologist, and/or documentation, preservation, and recovery of archival material.

Finally, the archaeologist shall prepare a report documenting the archaeological resources that were discovered, an evaluation as to their significance, and a description as to how any archaeological testing, exploration, and/or recovery program was conducted.

Copies of all draft reports prepared according to this mitigation measure shall be sent first and directly to the ERO for review. Following approval by the ERO, copies of the final report shall be sent to the President of the Landmarks Preservation Advisory Board and the California Archaeological Site Survey, Northwest Information Center. Three copies of the final report shall

be submitted to the Office of Major Environmental Analysis, accompanied by copies of the transmittals documenting distribution to the Present of the Landmarks Preservation Advisory Board and the California Archaeological Site Survey, Northwest Information Center

E. ALTERNATIVES TO THE PROPOSED PROJECT (page 102)

Alternative A: No Project

This alternative would entail no change to the site, which would remain in its existing condition. The No Project Alternative would not have any of the impacts of the proposed project, including the contribution to the cumulative growth of traffic at the intersections of Howard/Fourth, Mission/Fourth, and Howard/Fifth, which would be a significant impact of the proposed project. This alternative would not meet the project sponsor's objectives of developing market rate condominiums and a first class hotel accessible to the retail and commercial center of the City, the Yerba Buena Redevelopment Area, and the Moscone Convention Center.

Alternatives B-1 and B-2: Code-Compliant Alternative - Mixed-Use and Hotel-Only

These alternatives would entail a 160-foot-high, 16-story hotel project that complies with existing zoning, height, bulk, and Floor Area Ratio (FAR) restrictions. Alternative B-1 would be mixed-use while Alternative B-2 would be hotel-only. The alternatives would involve a lower of intensity of hotel uses than the proposed project, and would have no residential uses. Due to the smaller building size and lower intensity of use, the Code-Compliant Alternatives would have fewer environmental effects on visual quality and urban design, transportation and parking, population, shadows, construction noise, air quality, wind, utilities and public services, and energy/natural resources. These alternatives would have similar effects on land use, operation noise, biology, geology/topography, water, hazards, and cultural resources. The Code-Compliant Alternative B-1 would contribute approximately seven percent to the growth in cumulative volume at the intersection of Howard/Fifth, which would be considered a significant impact. In comparison, the proposed project would contribute more than six percent of the growth in cumulative volumes at three intersections. This alternative would partially satisfy the project sponsor's objectives by providing a smaller hotel, but would not provide any housing. A variant of this alternative (Alternative

B-2) would omit restaurant and retail uses and would contribute less than five percent to the growth in cumulative volumes at the Howard/Fifth intersection. There would be no potentially significant impacts, and this alternative variant would be environmentally superior.

F. AREAS OF CONTROVERSY AND ISSUES TO BE RESOLVED

This environmental impact report focuses on the issues of visual quality and urban design, shadows, wind, transportation, and air quality. All other potential environmental effects were found to be at a less-than-significant level or to be mitigated to a level of less-than-significance with mitigation measures agreed to by the project sponsor. Please see the Initial Study, included in this document as Appendix A, for analysis of issues other than land use, visual quality and urban design, shadows, wind, transportation, air quality, and growth inducement.

II. PROJECT DESCRIPTION

The project sponsor, 888 Howard Street Associates, LLC, proposes to construct a 39-story hotel and residential building of approximately 630,000 sq.ft. with two levels of below-grade parking at the corner of Fifth and Howard Streets. The hotel portion of the proposed project would contain about 500 rooms along with ancillary support uses such as meeting rooms, restaurants, and retail space. Above the hotel there would be 60 to 70 residential condominiums.

A. PROJECT SPONSOR'S OBJECTIVES

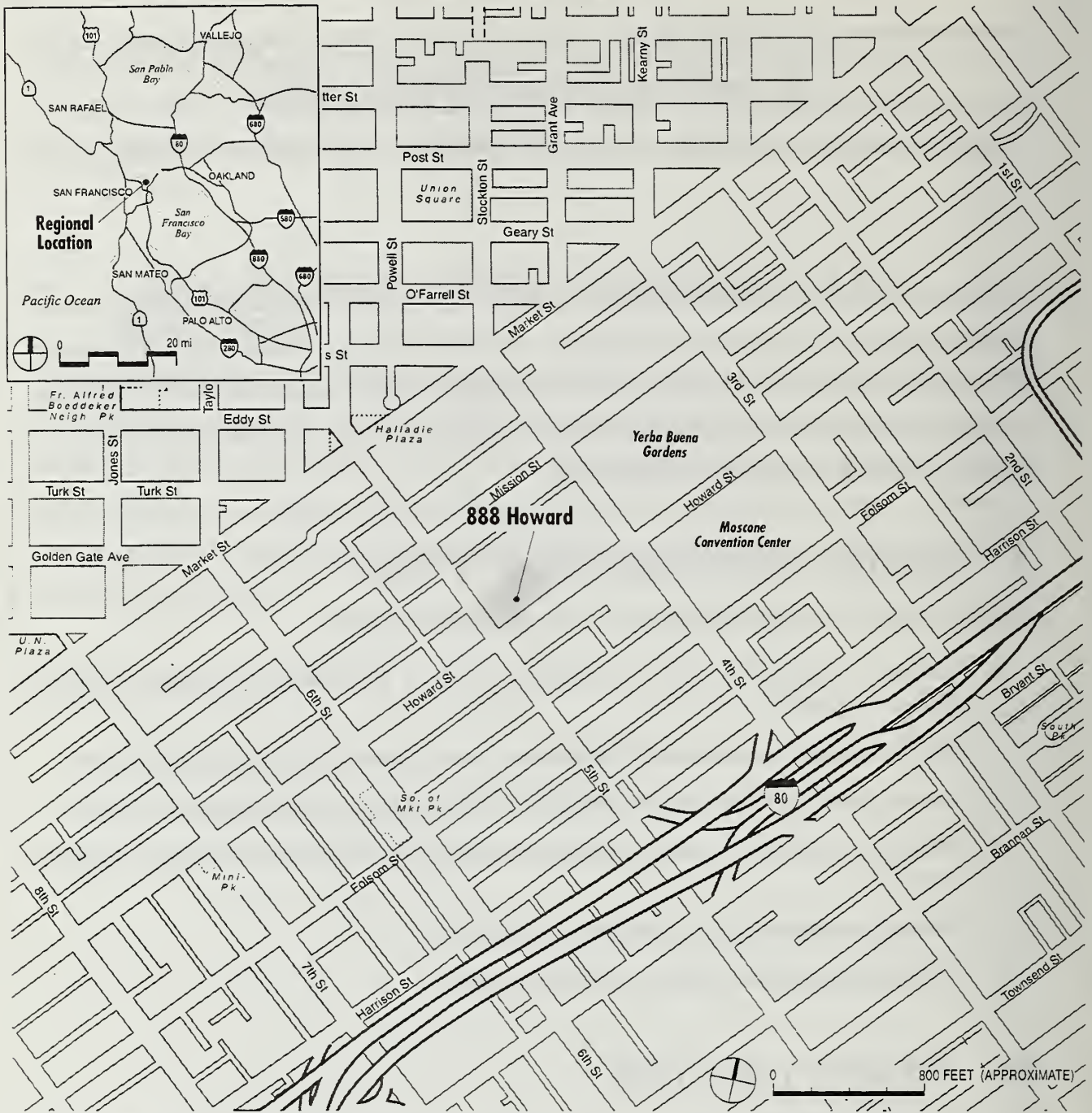
The project sponsor has the following objectives for the proposed project:

- Develop a high-quality, first class hotel to serve the Yerba Buena Area and the Moscone Convention Center
- Provide meeting room space and other facilities to serve the needs of the Convention Center
- Provide market rate condominiums accessible to the retail and commercial center of the City
- Design a structure that is unique and complementary to the Yerba Buena and South of Market Area
- Develop an underutilized site occupied by a parking lot
- Complete the project on schedule and within budget

B. PROJECT LOCATION

The project site is on the northeast corner of Fifth and Howard Streets in the South of Market area of San Francisco (Figure 1, Project Location, page 16).¹ The 37,860-square-foot site currently contains a surface

¹ Although Howard Street runs northeast to southwest, it is convention in San Francisco for it to be described as east-west.



Source: During Associates

PROJECT LOCATION FIGURE 1

parking lot with landscaping used by the employees of the adjacent Wells Fargo Data Center. The project site consists of the southern portion of Lot 66 in Assessor's Block 3724.² The site is rectangular shaped, approximately 275 feet long on the Howard Street frontage and north side, and about 137.7 feet long on the 5th Street and east property lines. The site is flat with a slight elevation change of two feet sloping up to the east.

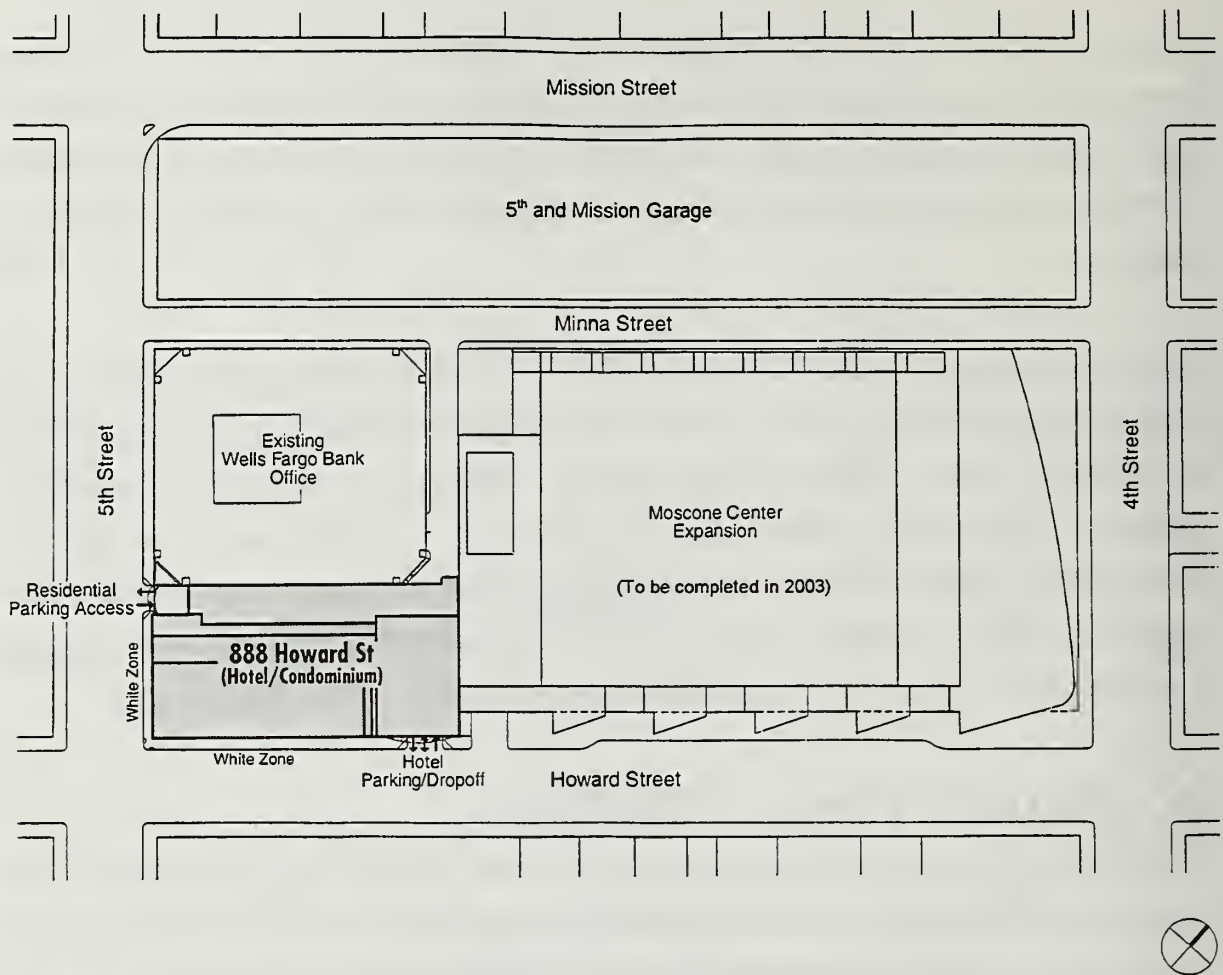
The project site is located in a C-3-S (Downtown Commercial Support) District in San Francisco and a 160-F Height and Bulk District. The C-3-S District accommodates important supporting functions such as wholesaling, printing, building services, secondary office space and parking near the intensive downtown core areas. It also contains unique housing resources. In its eastern portion, the district also serves in part as an expansion area for offices, at a lesser intensity than in the Downtown Office District. At the time the district was created, it was identified as having been for the most part been underdeveloped in the past, with opportunities for major developments of new uses covering substantial areas.

C. PROJECT CHARACTERISTICS

The proposed project would be the construction of a 39-story building, about 400 feet tall, with an approximate 630,000-square-foot hotel and residential building with two levels of below-grade parking. The proposed project calls for the excavation of approximately 39,275 cubic yards of soil to a depth of about 28 feet. The proposed two-level parking garage would accommodate approximately 61 independently accessible parking spaces or 100 valet parked spaces for the hotel in addition to about 67 spaces for the residential use.

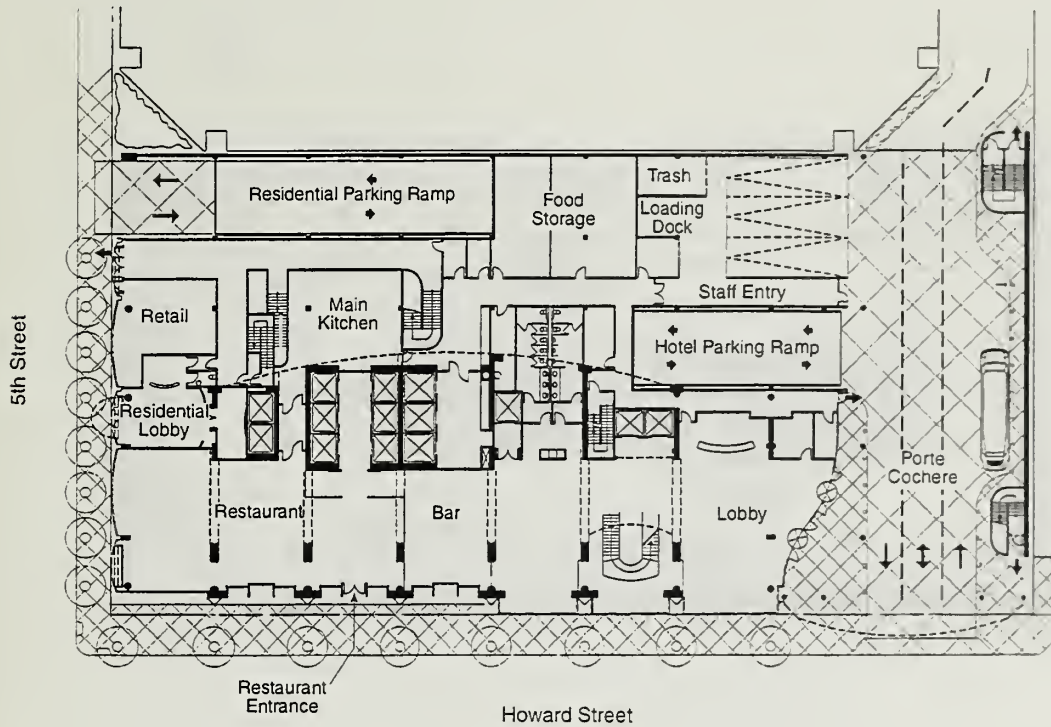
The hotel would be a full-service facility with approximately 500 rooms, and an approximately 4,000 square-foot restaurant on the ground floor, about 1,000 square feet of retail use, and about 40,200 sq ft of meeting and conference space (Figures 2 to 10, pages 18 to 26). The hotel would be specifically designed and operated to complement the Moscone Expansion III Project (Moscone West) currently under construction and due to open in 2003. The meeting spaces would include a main ballroom of

² Lot 66 also contains 63,418 sq.ft. which is occupied by the seven-story 337,407 sq.-ft. Wells Fargo Data Center and a two-story 7,307 sq.-ft. mechanical building



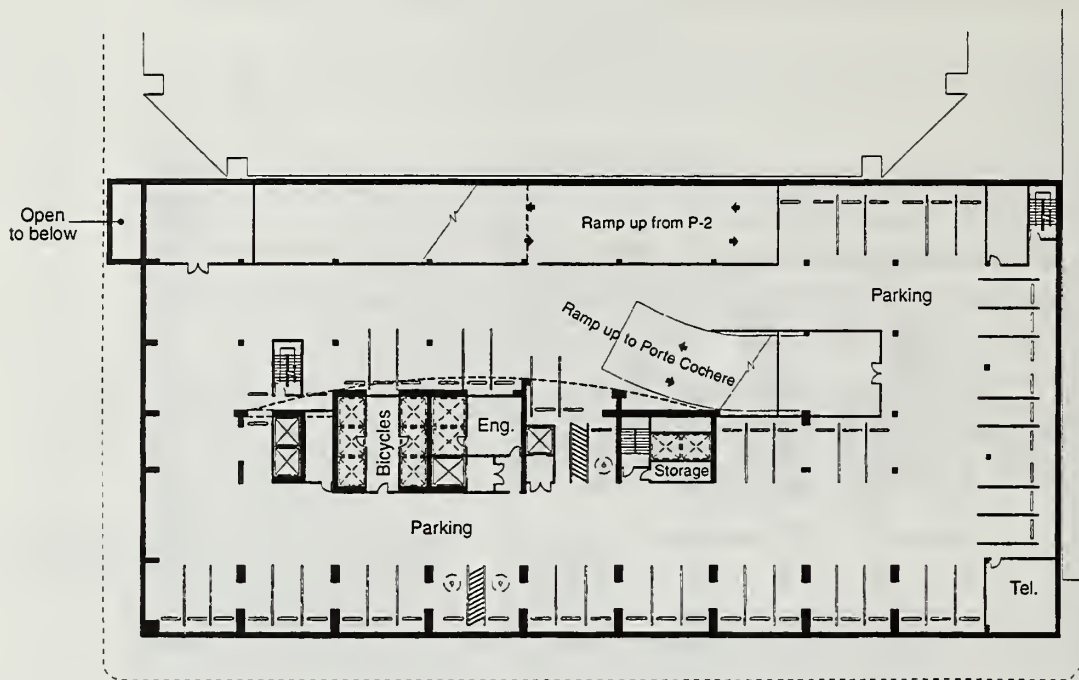
Source: Patri Merker Architects

SITE PLAN **FIGURE 2**



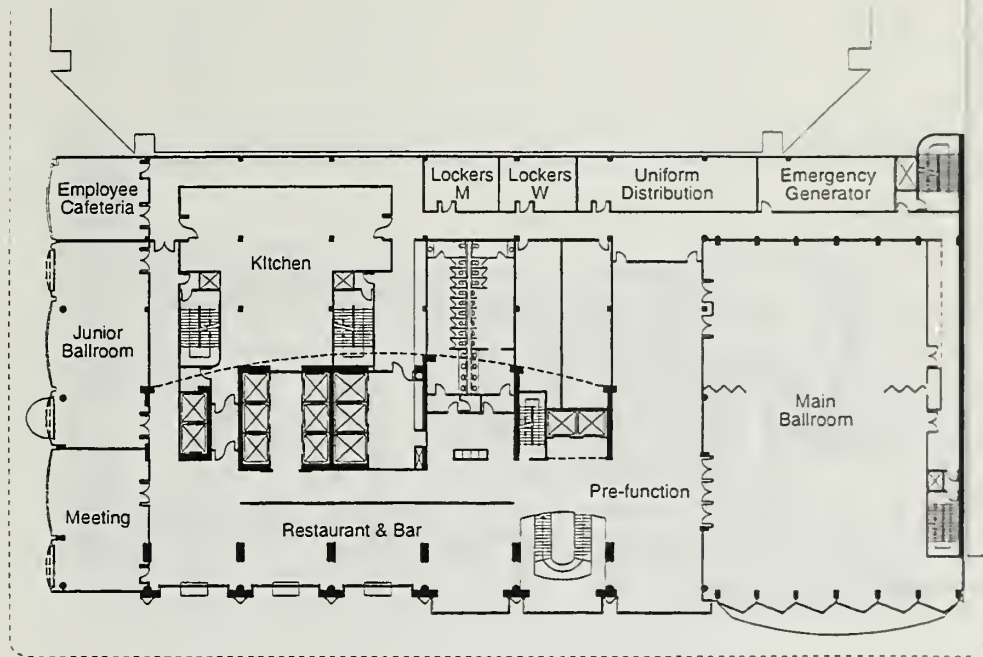
Source: Patri Merker Architects

GROUND FLOOR PLAN FIGURE 3



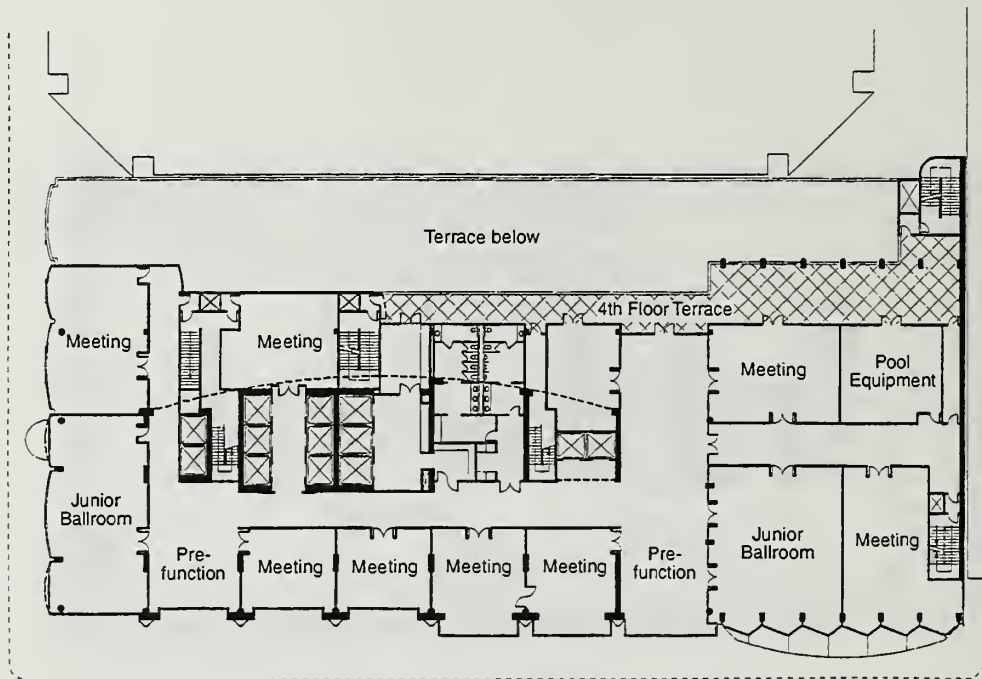
Source: Patri Merker Architects

LEVEL P-1 PARKING PLAN **FIGURE 4**



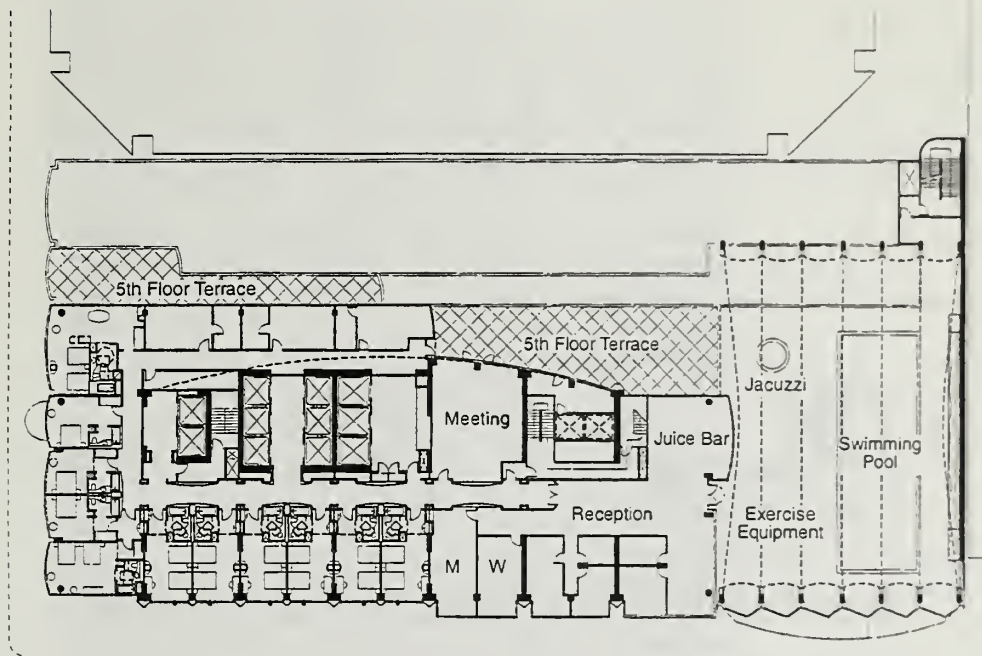
Source: Patri Merker Architects

SECOND FLOOR PLAN **FIGURE 5**



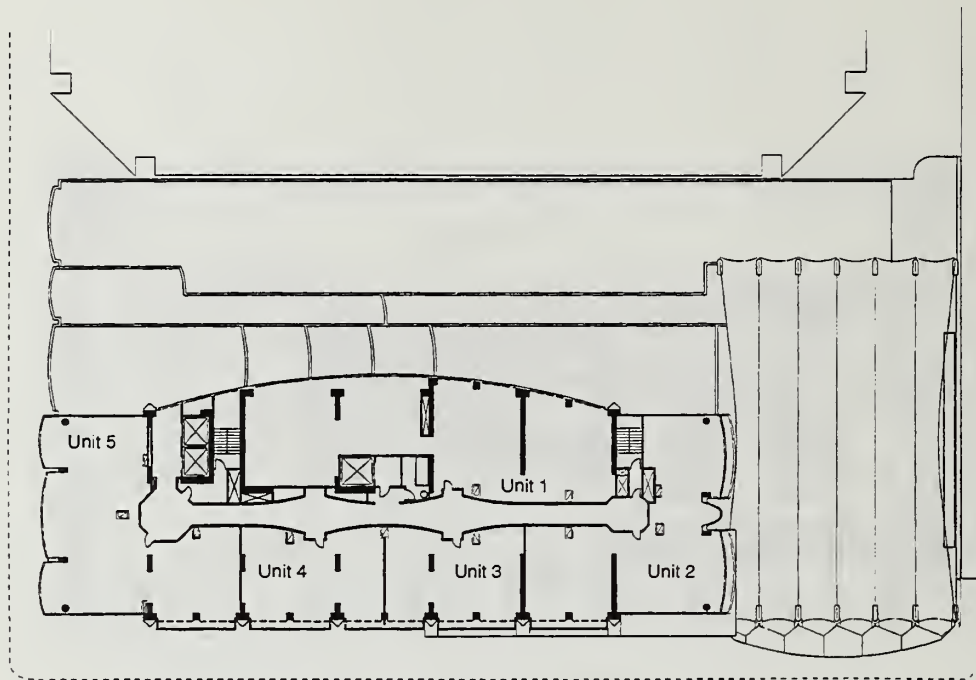
Source: Patri Merker Architects

FOURTH FLOOR PLAN FIGURE 6



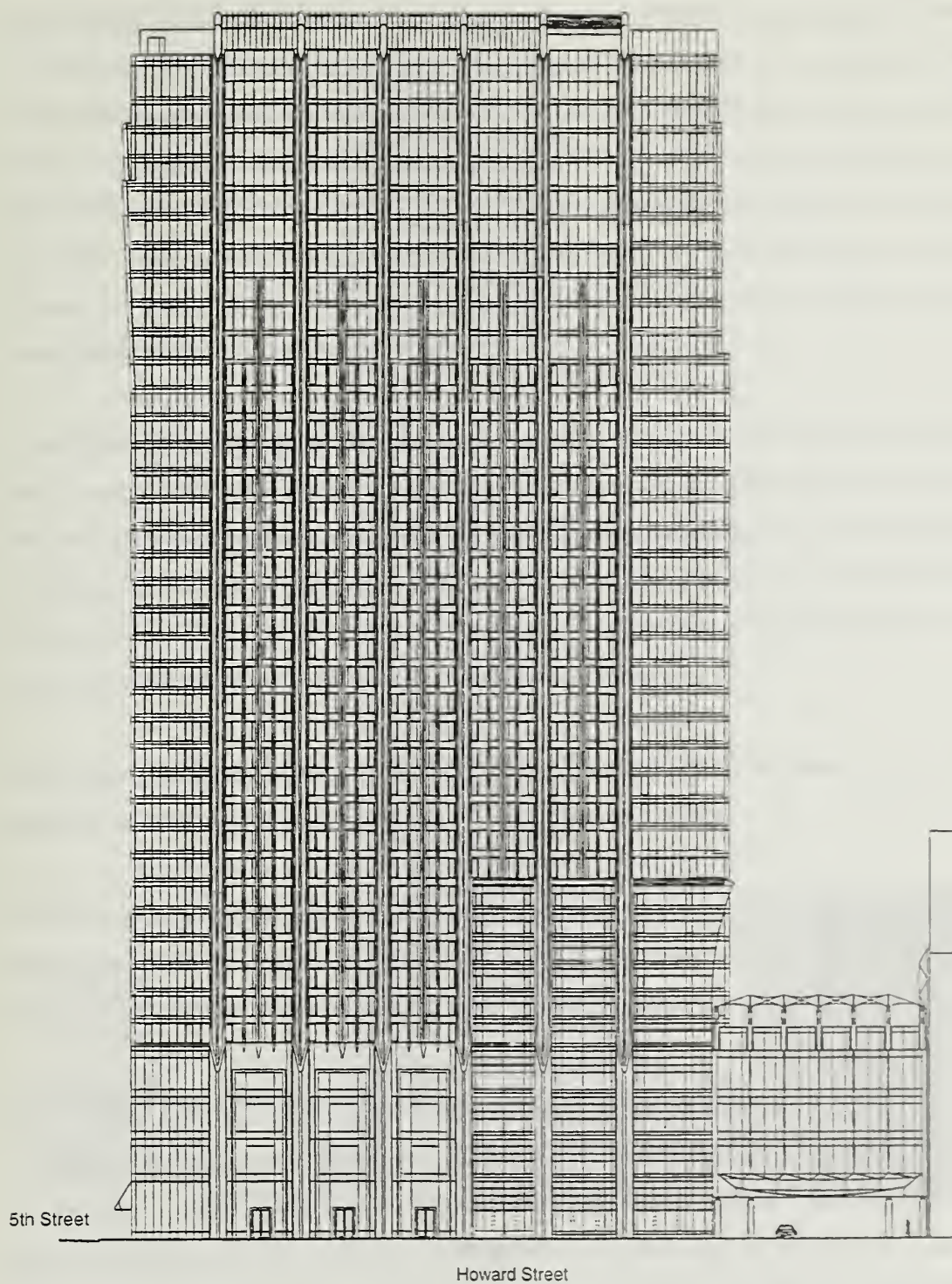
Source: Patri Merker Architects

FIFTH FLOOR PLAN FIGURE 7



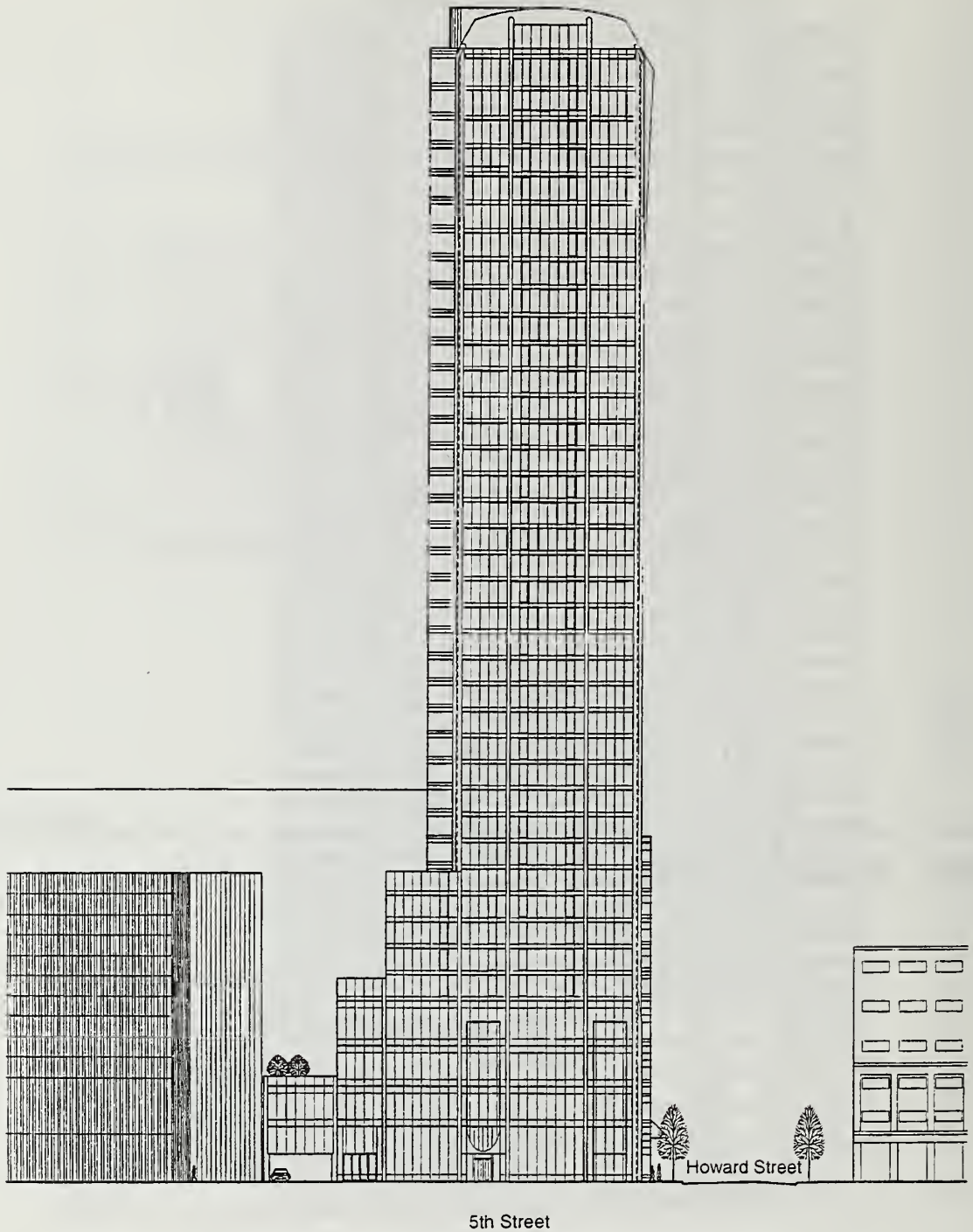
Source: Patri Merker Architects

RESIDENTIAL FLOOR PLAN FIGURE 8



Source: Patri Merker Architects

HOWARD STREET ELEVATION FIGURE 9



Source: Patri Merker Architects

FIFTH STREET ELEVATION FIGURE 10

approximately 7,200 sq. ft., four junior ballrooms, numerous meeting rooms totaling approximately 1,200 sq. ft. and a state-of-the-art equipped board room. Many of the meeting rooms would have direct access to a garden terrace on the third level. The fifth floor of the hotel would include a full-service health club and spa, including a 25-yard swimming pool. Guests would enter the hotel via a porte cochere on Howard Street on the east side of the building, which would also accommodate loading for two tourist buses. The restaurant would be on the southwest corner of the building fronting Fifth and Howard streets with the entrance on Howard Street. The retail space would front onto Fifth Street. A proposed 60-foot taxi-queuing area would be along Howard Street.

Above the hotel would be eleven floors of approximately 67 residential condominiums. Residents would have a separate lobby with concierge service on Fifth Street, two private elevators, and secured parking on the second level of the below grade parking garage. The approximately 67-space parking garage would have ingress and egress on Fifth Street. Residents would be able to select various services from the hotel and one of the hotel's service elevators would provide access to all floors of the condominiums. Residents would also have access to the hotel health club on the fifth floor.

Three loading docks would be provided adjacent to the Wells Fargo Data Center on the north side and would be accessed via the porte cochere off Howard Street.

Project construction would take about 25 months and the facility would open in the Spring of 2004, with construction starting in early 2002.. The project construction cost is estimated at \$115 million. The project sponsor is 888 Howard Street Associates, LLC, and the project architect is Patri Merker Architects.

D. PROJECT APPROVAL REQUIREMENTS

This EIR will undergo a public comment period as noted on the cover, including a public hearing before the Planning Commission on the Draft EIR. Following the public comment period, responses to written and oral comments will be prepared and published in a Draft Summary of Comments and Responses, presented to the Planning Commission for certification as to accuracy, objectivity, and completeness. No approvals or permits may be issued before the Final EIR is certified by the Planning Commission.

The *San Francisco Planning Code*, which incorporates by reference the City's Zoning Maps, governs permitted uses, densities, and the configuration of buildings within San Francisco. Permits to construct new buildings (or to alter or demolish existing ones) may not be issued unless either the proposed project conforms to the *Code*, or an exception is granted pursuant to provisions of the *Code*. The proposed project would require Conditional Use authorization from the Planning Commission, including a public hearing, for the hotel use, pursuant to the Planning Code, Sections 216(b), Other Housing (Hotels) and 303(g), Conditional Uses (Hotels and Motels). A Variance to the residential parking requirement would be required for the proposed 67 spaces (18 are required). The proposed project would also require review as a project in a C-3 District under Section 309 of the *Planning Code* by the City Planning Commission. As part of the Section 309 review, the proposed project would seek exceptions to the setback and rear yard requirements (Sections 132.1 and 134 (d)), and exceptions to the ground level wind current requirements (Section 148). No other exceptions would be required for the proposed project only if the associated applications for amendments to the Height, Bulk and Floor Area Ratio (FAR) are approved.

Pursuant to Section 302 of the *Planning Code*, the proposed project would require amendments to the Height, Bulk, FAR, and zoning designations of the site. The proposed change in the Height and Bulk District is from 160-F to 400-M. The 400-M Height and Bulk District permits buildings up to a height of 400 feet plus mechanical penthouses, and, for portions of buildings over 100 feet, a maximum dimension of 250 feet and a maximum diagonal dimension of 300 feet. (The existing 160-F Height and Bulk District permits buildings up to a height of 160 feet, and, for portions of buildings over 80 feet, a maximum dimension of 110 feet and a maximum diagonal dimension of 140 feet.) The proposed zoning change is from the existing C-3-S (Downtown Commercial Support) zoning designation to C-3-S (SU), Downtown Commercial Support with Special Use Overlay for Hotel and Residential, to allow for a 7.5:1 FAR for hotel uses and no FAR requirement for Residential uses and related subsurface parking for each use. (In the C-3-S zone, the allowable FAR is 5:1, or 7.5:1 with Transfer of Development Rights (TDRs)).

The proposed project would also require amendments to the San Francisco *General Plan* corresponding to the changes in height, bulk, and density discussed above. The City's *General Plan*, which provides general policies and objectives to guide land use decisions, contains some policies which relate to physical environmental issues. The proposed project would not obviously or substantially conflict with any such

adopted environmental plan or policy, although, as mentioned above, the proposed project is not consistent with height, bulk, and density provisions of the *General Plan*, and would require amendments to the *Plan*. In general, potential conflicts with the *General Plan* are considered by decision makers independently of the environmental review process, as part of the decision whether to approve or disapprove a proposed project. Conflicts either identified in this environmental document or not would be considered in that context, and would not alter the physical environmental effects of the proposed project.

The proposed project would require approval from the Department of Public Works for a lot split to create an individual parcel for the project from the existing lot that also includes the adjacent existing office building.

Environmental plans and policies are those, like the Bay Area *Air Quality Plan*, which directly address physical environmental issues and/or contain targets or standards which must be met in order to preserve or improve characteristics of the City's physical environment. The proposed project would not obviously or substantially conflict with any such adopted environmental plan or policy.

In November 1986, the voters of San Francisco approved *Proposition M, the Accountable Planning Initiative*, which added Section 101.1 to the *San Francisco Planning Code* to establish eight Priority Policies. These policies are: preservation and enhancement of neighborhood-serving retail uses; protection of neighborhood character; preservation and enhancement of affordable housing; discouragement of commuter automobiles; protection of industrial and service land uses from commercial office development and enhancement of resident employment and business ownership; maximization of earthquake preparedness; landmark and historic building preservation; and protection of open space. Prior to issuing a permit for any project which requires an Initial Study under CEQA; prior to issuing a permit for any demolition, conversion, or change of use; and prior to taking any action which requires a finding of consistency with the General Plan, the City is required to find that the proposed project or legislation is consistent with the Priority Policies. The case report and approval motions for the proposed project will contain the analysis determining whether the proposed project is consistent with the Priority Policies.

III. ENVIRONMENTAL SETTING AND IMPACTS

An application for environmental evaluation for the proposed project was filed July 31, 2000. On the basis of an Initial Study published on January 20, 2001, the San Francisco Planning Department determined that an EIR was required. The Initial Study determined that the following effects of the proposed project would either be insignificant or would be reduced to a less-than-significant level by mitigation measures included in the proposed project and thus required no further analysis: land use; population; noise; utilities/public services; biology; geology/topography; water; energy/natural resources; hazards; and cultural resources (see Appendix A, page A-1, for the Initial Study). Therefore, the EIR does not discuss these issues. The proposed project's potentially significant impacts in the areas of visual quality and glare, transportation, air quality, shadows, and wind are assessed in this chapter. Land use is discussed in the EIR for informational purposes.

By convention, "east" and "west" in this EIR refer to the directions of Howard and Market Streets and parallel streets. "North" and "south" refer to the directions of Fourth and Fifth Streets and parallel streets.

A. LAND USE, ZONING, AND GENERAL PLAN CONSISTENCY

The Initial Study concluded that the proposed project would not have significant adverse land use impacts (for further information, see Appendix A, page A-15). Land use information is included in the EIR for informational purposes and to orient the reader.

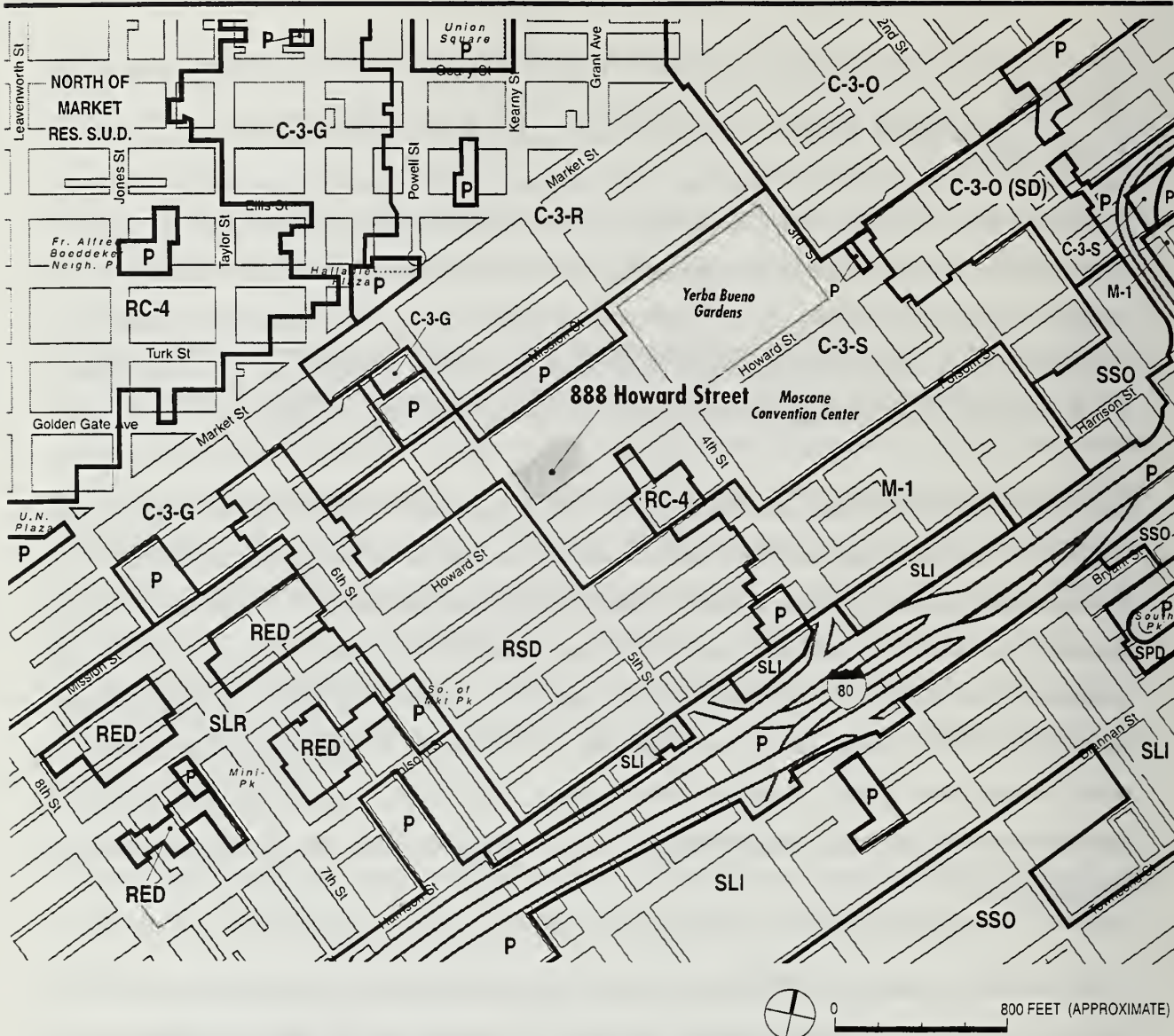
Setting

LAND USE

The project site is within a C-3-S (Downtown Commercial Support) District (see Figure 11, page 32). Zoning districts in the surrounding area include P (Public Use), RSD (Residential Service District), C-3-G (Downtown General Commercial), C-3-R (Downtown Retail District), RC-4 (Residential-Commercial Combined District, High-Density), and M-1 (Light Industrial). The proposed project is in a 160-F Height and Bulk District. Existing heights in the project area are shown in Figure 12, page 33.

Section 210.3 of the San Francisco *Planning Code* describes the C-3-S District in the following manner: “This district accommodates near the intensive downtown core areas important supporting functions such as wholesaling, printing, building services, secondary office space and parking. It also contains unique housing resources. Motor vehicle access from freeway ramps to this district is good, and truck and automobile traffic is heavy; at the same time, the district is within walking distance of rapid transit on Market Street. In its eastern portion, the district also serves in part as an expansion area for offices, at a lesser intensity than in the Downtown Office District. The district has for the most part been underdeveloped in the past, and opportunities exist for major developments of new uses covering substantial areas.”

The project site is in the South of Market area, near the western border of the Yerba Buena Center (YBC) Redevelopment Area. The South of Market area east of the site and the YBC Redevelopment Area are occupied by office, commercial, hotel, museum, and performing arts uses, including many recently-constructed and high-rise buildings. Further north of the site is the Financial District with high-rise office buildings up to 400 feet or more in height, many of relatively recent construction. The portion of the South of Market area to the south and west of the site is occupied primarily by two- to five-story buildings dating from the early part of the twentieth century, housing a mix of residential, hotel, retail, office, commercial, and light industrial uses.



LEGEND

- Zoning boundary
- RC-4** Residential-Commercial combined district, high density
- C-3-G, C-3-O, C-3-O (SD), C-3-R, C-3-S** Downtown Commercial districts
- M-1** Industrial districts
- P** Public Use districts
- RED, RSD, SPD, SLI, SLR, SSO** South of Market Use districts

Source: San Francisco City Planning Department

EXISTING ZONING DISTRICTS IN THE PROJECT VICINITY FIGURE 11

Immediately to the east of the proposed project site on the same side of Howard Street, the Moscone Expansion III Project (Moscone West) is under construction. Further east, in the block bounded by Mission, Howard, Third, and Fourth Streets, is the north block of the Moscone Center, with the five-story Metreon building on the east side of Fourth Street, the mid-block Yerba Buena Gardens, and the Visual Arts and Performing Arts Centers on the west side of Third Street. The south block of the Moscone Center occupies the block bounded by Folsom, Howard, Third, and Fourth Streets, and includes the Carousel, Zeum building, and ice skating rink. The San Francisco Museum of Modern Art is on the east side of Third Street, between Howard and Mission Streets, and the 29-story W Hotel is on the northeast corner of Howard and Third Streets. The 39-story, 400-foot Marriott Hotel is located at the northeast corner of Fourth and Mission Streets. The 41-story, 418-foot-high Related Companies residential/retail/institutional project is under construction on the northeast corner of Third and Mission, and the 40-story, 434-foot-high, Starwood St. Regis hotel and residential project has started construction on the southeast corner of Third and Mission.

At the southwest corner of Natoma and Fifth Streets opposite the proposed project site is a private parking area, with a two-story commercial building further south, and a five-story building with a ground-floor restaurant and residential units above on the northwest corner of Howard and Fifth Streets. Immediately north of the proposed project site at Fifth and Minna Streets is a seven-story office building occupied by Wells Fargo Bank. Further north on the east side of Fifth Street, the seven-level Fifth and Mission Garage occupies the area bounded by Minna, Mission, Fourth, and Fifth Streets. Further north, the eight-story Hotel Pickwick is on the northeast corner of Mission and Fifth Streets, with a two-story building used for parking adjacent to Hotel Pickwick. On the west side of Fifth Street, on the northwest corner of Fifth and Mission Streets, is the closed historic US Mint Museum building. The block bounded by Fifth, Mission, Minna, and Mary Streets is occupied by the San Francisco Newspaper Agency building (formerly the San Francisco Chronicle Building), which extends over Minna Street to the south. Further south is a private surface parking area serving the Newspaper Agency building. In the block bounded by Mission, Market, Fourth and Fifth is the under-construction 250-foot-high, 22-story Emporium Site Hotel complex. The 37-story Four Seasons Hotel and Residences is under construction on the south side of Market Street between Third and Fourth Streets.

On the south side of Howard Street, between Fourth and Fifth Streets, there is a nine-story senior housing facility at the southwest corner of Fourth and Howard Streets. To the west of this building on the south side of Howard Street are a two-story commercial building, a landscaped parking area serving the 320 and 330 Clementina Towers to the south, a three-story commercial/office building, a vacant three-story commercial building, a three-story commercial/office building, the two-story Pacific Gas and Electric Company Energy Center, and a two-story commercial building with a restaurant on the first floor. This commercial building is adjacent to the Burlington Coat Factory building, which faces the project site and extends to Fifth Street. The Burlington Coat Factory building houses a variety of retail outlets and other uses and is currently being renovated to include office/research, development and technology uses. The eastern portion of this building is six stories tall and the western portion, located on the southeast corner of Fifth and Howard Streets, is three stories. The southwest corner of Fifth and Howard Streets is occupied by a surface parking lot, and on the northwest corner of Howard and Fifth Streets, opposite the proposed project site, is a five-story building with a ground-floor restaurant and residential units above. On Howard Street between Fifth and Sixth Streets are a number of buildings two to five stories in height, most of which date from the early part of the twentieth century and contain printing, commercial, office/research, development and technology, residential, live/work, hotel, restaurant/bar, auto repair uses and parking.

South of the proposed project site on Fifth Street, on the southeast corner of Tehama and Fifth Streets, is a two-story commercial building, with an approximately 15-story apartment tower at the northeast corner of Clementina and Fifth Streets. Further west, Tehama Street is occupied by residential, live/work, and commercial buildings of one to eight stories in height, with the majority between two and four stories.

PLANS

The General Plan and Downtown Plan

The project site is within the part of San Francisco covered by the Downtown Plan, an Area Plan of the *San Francisco General Plan*. The proposed project would intensify use of the site in a manner generally consistent with the Downtown Plan, although the proposed project would require amendments to the

Height, Bulk, FAR, and zoning designations of the site, as discussed in Comparison with Existing Plans, Plans and Approvals, below.

The Downtown Plan is the policy document that guides most growth and development in San Francisco's downtown. Centered on Market Street, the plan covers an area roughly bounded by Van Ness Avenue on the west, The Embarcadero on the east, Folsom Street on the south, and Washington Street on the north. The plan contains a number of objectives and policies that address the following issues: provision of space for commerce, retail, housing, and open space; preservation of the past; urban form, movement to, from, and within the downtown area, and seismic safety.

Some key objectives and policies of the *General Plan* relevant to the proposed project are noted here; others may be addressed during consideration of project approval.

Downtown Plan Objectives and Policies

- Objective 1, Policy 1, to “encourage development which produces substantial net benefits and minimizes undesirable consequences. Discourage development which has substantial undesirable consequences which cannot be mitigated.”
- Objective 2, to “maintain and improve San Francisco’s position as a prime location a for financial, administrative, corporate and professional activity.”
- Objective 4, to “enhance San Francisco’s role as a tourist and visitor center.”
- Objective 4, Policy 1, to “guide the location of new hotels to minimize their adverse impacts on circulation, existing uses and scale of development.”
- Objective 6, to “provide space for future office, retail, hotel service and related uses within acceptable levels of density in downtown San Francisco.”
- Objective 13, Policy 4, to “relate the height of buildings to important attributes of the City pattern and to the height and character of existing and proposed development.”
- Objective 15, Policy 1, to “ensure the new facades relate harmoniously with nearby facade patterns.”
- Objective 16, Policy 4, to “use designs and materials and include activities at the ground floor to create pedestrian interest.”

Commerce and Industry Element

- Objective 1, Policy 1, to “encourage development which provides substantial net benefits and minimizes undesirable consequences. Discourage development which has substantial undesirable consequences that cannot be mitigated.”
- Objective 3, to “provide expanded employment opportunities for City residents, particularly the unemployed and economically disadvantaged.”

Urban Design Element

- Objective 3, Policy 1, to “promote harmony in the visual relationships and transitions between new and older buildings.”
- Policy 2, to “avoid extreme contrasts in color, shape and other characteristics which will cause new buildings to stand out in excess of their public importance.”
- Policy 5, to “relate the height of buildings to important attributes of the city pattern and to the height and character of existing development.”
- Policy 6, to “relate the bulk of buildings to the prevailing scale of development to avoid an overwhelming or dominating appearance in new construction.”

Environmental Protection Element

- Objective 1, Policy 4, to “assure that all new development meets strict environmental quality standards and recognizes human needs.”
- Objective 14, to “promote effective energy management practices to maintain the economic vitality of commerce and industry.”
- Objective 14, Policy 1, to “increase the energy efficiency of existing commercial and industrial buildings through cost-effective energy management measures.”

Community Safety Element

- Objective 2, to “preserve, consistent with life safety considerations, the architectural character of buildings and structures important to the unique visual image of San Francisco.”

Zoning

The project site is located in a C-3-S (Downtown Commercial Support) District in San Francisco and a 160-F Height and Bulk District. The C-3-S District accommodates, near the intensive downtown core areas, important supporting functions such as wholesaling, printing, building services, secondary office space and parking. It also contains unique housing resources. In its eastern portion, the district also serves in part as an expansion area for offices, at a lesser intensity than in the Downtown Office District. At the time the district was created, it was identified as having been for the most part been underdeveloped in the past, with opportunities for major developments of new uses covering substantial areas.

B. VISUAL QUALITY/URBAN DESIGN

Setting

Visual quality in an urban setting is comprised of elements such as building scale, height, architectural features and materials, patterns of buildings along street frontages, and views of public open space or plazas or of more distant landscape features such as hills, the Bay, or built landmarks such as bridges. These elements help define the sense of place in an urban context. In general, positive urban design character in San Francisco, as reflected in General Plan policies, encourages “street walls” of buildings fronting on sidewalks, maintaining buildings of architectural character, moderating scale of new development to relate to existing, older buildings, and protection of important views of open space or landmarks.

The project site, in Assessor’s Block 3724, is in the southwest corner of the block bounded by Howard, Fifth, Fourth, and Minna Streets. The site is currently occupied by a landscaped parking area. The project vicinity is a mix of residential, office, commercial, retail, hotel, museum, performing arts, and light industrial uses of varying ages. The area to the east and north of the site is characterized by a higher proportion of more recent buildings, many of them high-rises, including the Yerba Buena Center to the east and the downtown financial district to the north. These buildings include contemporary designs such as the Moscone Convention Center, the Yerba Buena Visual Arts and Performing Arts Centers, the Sony Metreon Entertainment Center, the San Francisco Museum of Modern Art, the Wells Fargo Bank building immediately north of the project site, the Fifth & Mission Garage, the W Hotel, and the Marriott Hotel.

In contrast, the area to the south and west of the project site is characterized by older two- to five-story buildings dating from the early part of the twentieth century.

As discussed in the previous section, A. Land Use, Zoning, and General Plan Consistency, Setting, there are several high-rise buildings existing or under construction in the project vicinity. Existing buildings include the 39-story, 400-foot Marriott Hotel on the northeast corner of Fourth and Mission Streets and the 29-story W Hotel on the northeast corner of Howard and Third Streets. Buildings under construction include the 37-story Four Seasons Hotel and Residences on the south side of Market Street between Third and Fourth Streets, the 40-story Starwood St. Regis hotel and condominium project at the southeast corner of Third and Mission Streets, and the 41-story Related Companies residential/retail/institutional project on the northeast corner of Third and Mission Streets.

Significance Criteria

A project may result in significant adverse visual quality impacts if it (1) degrades or obstructs scenic views from public areas, (2) introduces new sources of light or glare, or (3) has demonstrable negative aesthetic effects on the character of the surrounding area.

Project Impacts

The proposed project would construct a 39-story, approximately 400-foot-high mixed use building at the northeast corner of Howard and Fifth Streets. The proposed project would be substantially higher than most surrounding buildings and would be visually prominent from many vantage points, both near and distant. Photosimulations of the proposed project from various viewpoints are identified in Figure 13, page 40. (Note: The photosimulations deliberately accentuated the color of the proposed project to provide contrast).

Figure 14, page 41, is a simulation of the proposed project viewed from a point one block to the south, at Fifth and Folsom Streets. The proposed project's height and configuration would make it readily apparent from this location.

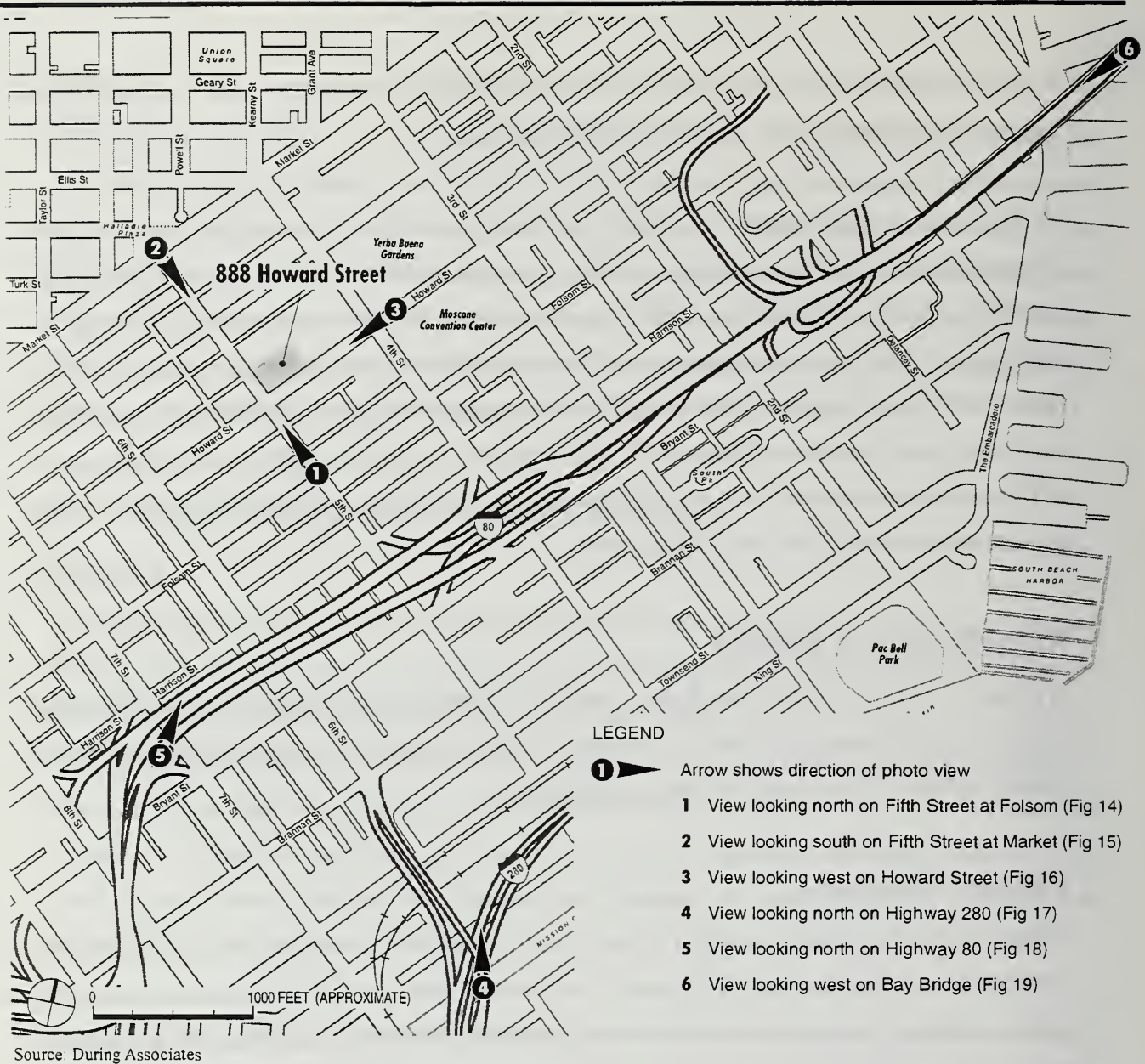


PHOTO LOCATIONS FIGURE 13



Site Photo

Source: Square One Productions



Photomontage

VIEW LOOKING NORTH ON FIFTH STREET AT FOLSOM STREET FIGURE 14

Figure 15, page 43, is a view of the proposed project from a point on Market Street two blocks to the north, looking south along Fifth Street. The proposed project would be visible from portions of Market Street, such as the intersection of Market and Fifth Streets depicted in Figure 14, while existing buildings along Market Street would block street-level views of the proposed project from other segments of Market Street.

Figure 16, page 44, is a view of the proposed project from the intersection of Howard and Fourth Streets approximately one block east of the site, looking west along Howard Street. In addition to the proposed project, Figure 16 simulates the completion of the Moscone Expansion III Project (Moscone West) that is currently under construction immediately adjacent to the project site on Howard Street. The proposed project would be readily apparent, due to its height relative to surrounding buildings.

Figure 17, page 45, is a view of the proposed project from a more distant vantage point, Interstate Highway 280 (I-280) looking north. This photomontage includes the existing skyline and simulations of the proposed project plus two under-construction projects: the 40-story St. Regis hotel and condominium project and the 41-story Related Companies residential/retail/institutional project. The proposed project would be readily visible from this vantage point and would constitute a new visual element and one of the taller buildings of the downtown skyline, although it would not exceed the heights of the highest existing buildings. The proposed project, although apparent, would be similar in visual character to other high-rise buildings in the existing downtown cityscape, and would constitute an addition to the prevailing view rather than a contrasting visual element.

Figure 18, page 46, is a view of the proposed project from a second more-distant vantage point, Interstate Highway 80 (I-80) looking north. This photomontage includes the existing skyline, the proposed project, and three approved projects: the 22-story Emporium Site Hotel complex, the 40-story St. Regis hotel and condominium project, and the 41-story Related Companies residential/retail/institutional project. As the highest building in its immediate vicinity, the proposed project would be readily apparent and represent a new visual element, but would be similar in visual character to other high-rise buildings in the existing downtown cityscape. If the three approved projects are not constructed for any reason, the proposed project would be even more apparent.



Site Photo



Photomontage

Source: Square One Productions

VIEW LOOKING SOUTH ON FIFTH STREET AT MARKET FIGURE 15

Site Photo



Photomontage



Source: Square One Productions

VIEW LOOKING WEST ON HOWARD STREET FIGURE 16

Site Photo



Photomontage



Source: Square One Productions

VIEW LOOKING NORTH ON HIGHWAY 280 FIGURE 17

Site Photo



Photomontage



Source: Square One Productions

VIEW LOOKING NORTH ON HIGHWAY 80 FIGURE 18

Figure 19, page 48, is a view of the proposed project from a third more-distant vantage point, the Bay Bridge looking west. Along with the existing skyline and proposed project, this photomontage simulates three approved projects: the 22-story Emporium Site Hotel complex, the 40-story St. Regis hotel and condominium project, and the 41-story Related Companies residential/retail/institutional project. The upper portion of the proposed project would be visible, while the remainder would be screened by intervening structures. From this vantage point, the proposed project would be visible but less conspicuous than other structures in the downtown skyline. However, if the approved buildings are not constructed the proposed project would be more conspicuous.

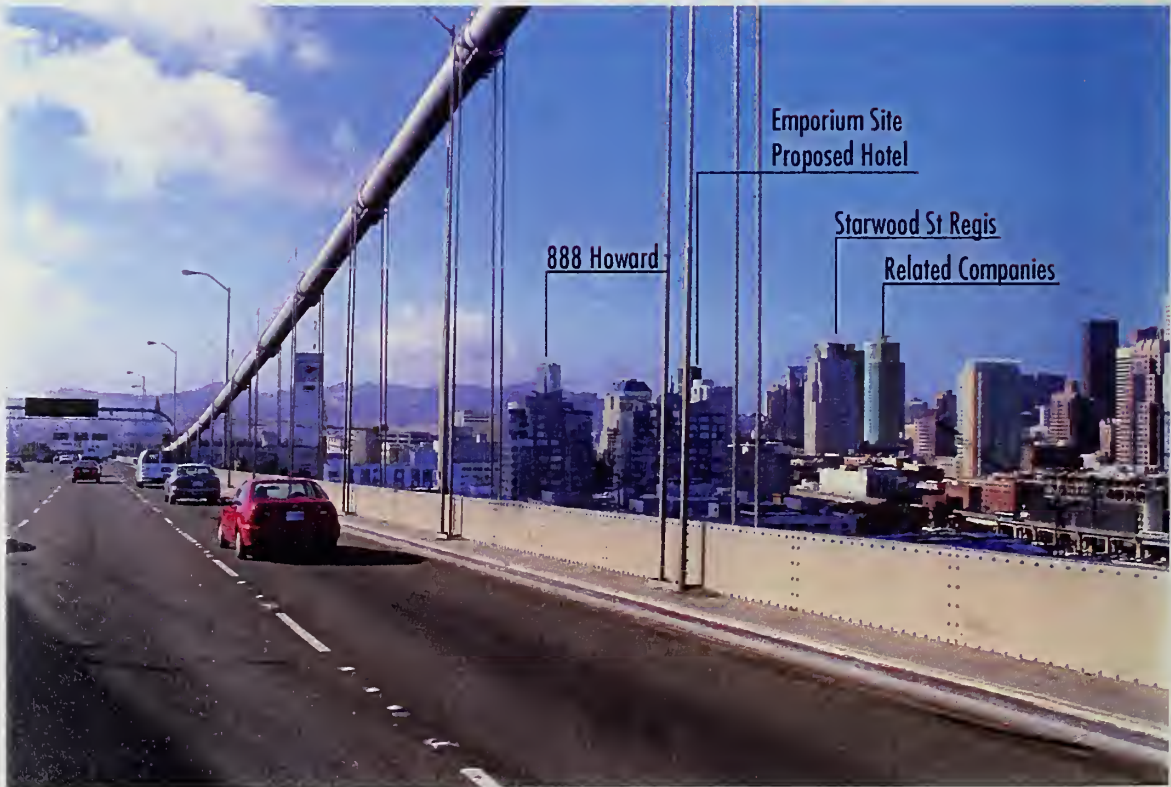
At night, the project building would be prominently illuminated from within. This lighting, in combination with the building's height and configuration, would make the proposed project clearly visible at night. This lighting, while apparent, would not cause excessive light or glare.

The topography of the area surrounding the site is flat, and existing development limits views from streets and sidewalks. The proposed project would be visible from various locations, but it would not block any views along public view corridors. In the vicinity of the project site, public views are available from Yerba Buena Gardens (one block east of the project site), Hallidie Plaza (two blocks north of the project site), South of Market Recreation Center (one block west of the site), Howard-Langton Mini-Park (approximately two and one-half blocks west of the project site), Union Square (approximately 0.4 mile northeast of the site), and Boeddeker Park (approximately 0.4 mile northwest of the site), as shown in Figure 1: Project Location (page 16). Views from Yerba Buena Gardens to the west toward the project site are limited by the five-story Metreon building between the Gardens and the site. Most views from Hallidie Plaza are limited by intervening buildings on the south side of Market Street. Views from South of Market Recreation Center would also be limited by intervening buildings along Sixth Street. From other more distant public spaces (Howard-Langton Mini-Park, Union Square, and Boeddeker Park), intervening buildings would block most views of the proposed project, and the proposed project would be less prominent due to its distance. Thus, while the proposed project would be visible from various locations, possibly including some open spaces, the proposed project would not block any public view corridors. Private buildings in the area may have views of hills to the west, the downtown skyline to the northeast, or beyond. Views from public streets or private properties, especially nearby high-rise buildings, may be

Site Photo



Photomontage



Source: Square One Productions

VIEW LOOKING WEST ON BAY BRIDGE FIGURE 19

altered by the proposed construction, although this effect would be limited by the fact that the neighborhood is already densely developed.

The proposed project would be substantially higher than the majority of 3 to 5 story buildings in the immediate vicinity, although it would be similar in height to the highest buildings in the downtown area further from the project site. As such, it would be a major new element and a noticeable increase in the existing scale of development, and would be visible from many nearby and distant viewpoints. The proposed project would represent an expansion and extension of the growth of contemporary high-rise development from the downtown area to the north and east, and the proposed project would comprise the highest building on the southern border of this development. The proposed project would be similar in height, visibility, and visual character, however, to the 39-story Marriott Hotel at Fourth and Mission Streets, the 37-story Four Seasons Hotel and Residences recently completed on Market Street between Third and Fourth Streets, the 40-story Starwood St. Regis hotel and condominium project and the 41-story Related Companies residential/retail/institutional project under construction at the intersection of Third and Mission Streets. The design, materials, and exterior treatment of the proposed project would also be consistent with these buildings and other contemporary buildings in the area. The proposed project would be visible from more distant vantage points. Although the proposed project would contrast with the existing lower scale development to the south and west of the project site, it would be consistent in character and height with the existing cityscape of high-rise contemporary buildings in the downtown area (C-3 Zoning Districts) to the North and East. As a result, it cannot be concluded that the proposed project would have demonstrable negative aesthetic effects on the character of the surrounding area.

In conclusion, the proposed project would not block public views or vistas, cause excessive light or glare, or have demonstrable negative aesthetic effects on the character of the surrounding area. For these reasons, the proposed project would have a less than significant impact on urban design and visual quality.

C. SHADOWS AND WIND

Shadows

SETTING

The existing landscaped parking lot on the site does not cast any substantial shadows on streets and sidewalks in the project vicinity.

The nearest open space areas owned by, or under the jurisdiction of, the Recreation and Park Department are South of Market Recreation Center located west of Sixth Street between Howard and Folsom Streets (one block west of the site), Howard-Langton Mini-Park at Howard and Langton Streets (approximately two and one-half blocks west of the project site), Union Square (approximately 0.4 mile northeast of the site), and Boeddeker Park (approximately 0.4 mile northwest of the site). Yerba Buena Gardens, one block east of the project site, is within the Yerba Buena Redevelopment Area and is maintained by the Moscone Convention Center. Hallidie Plaza, two blocks north of the project site, is owned by the Department of Real Estate. Neither of these open space areas is in Recreation and Park Department jurisdiction.

SIGNIFICANCE CRITERIA

City Planning Code Section 295, adopted in 1984 pursuant to voter approval of Proposition K., prohibits the issuance of building permits for structures over 40 feet in height that would shade property under the jurisdiction of, or designated to be acquired by, the Recreation and Park Commission unless the City Planning Commission, in consultation with the General Manager of the Recreation and Park Commission, determines that the shade would not have a significant impact on the use of such property. Project effects would be considered significant if the proposed project created new shadow in violation of the *City Planning Code*.

In addition, Section 147 of the *City Planning Code* states that any new development in the C-3 districts should be shaped, consistent with the dictates of good design and without unduly restricting the development potential of the site in question, to reduce substantial shadow impacts on public plazas and publicly accessible spaces. Factors to be taken into account in the determination of shadow impacts

include the amount of open area shadowed, the duration of the shadow, and the importance of the type of open space being shadowed.

IMPACTS

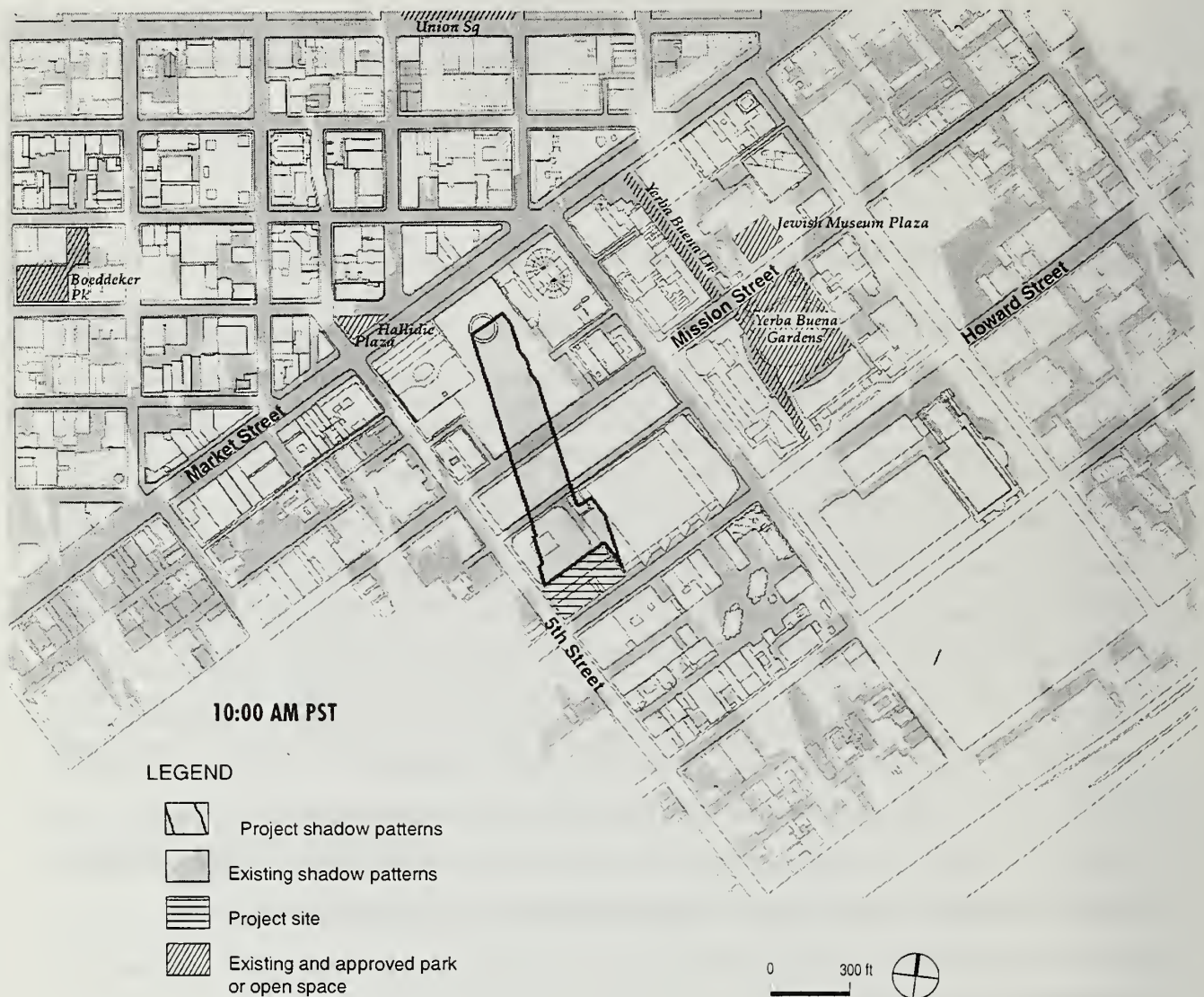
Shadow Effects

Shadow patterns for existing, proposed, and approved buildings in the project area, and the proposed project, are shown in Figures 20, 21, 22, 23, 24 and 25, pages 52 through 57 for representative times of the day during the four seasons: during winter and summer solstices, when the sun is at its lowest and highest, and during spring and fall equinoxes, when the sun is at its midpoint. Shadow conditions from July through December mirror conditions from January through June (notwithstanding daylight saving time). The times selected for analysis include 10:00 a.m., 12:00 p.m., and 3:00 p.m. Pacific Standard Time (PST) in December and March, and 10:00 a.m., 12:00 p.m., and 3:00 p.m. Pacific Daylight Time (PDT) in June and September¹. The analysis includes shadow cast on streets, sidewalks, pedestrian areas, and open space in the area of potential project impact. The diagrams show existing and approved building shadow and, in darker outline, new shade resulting from the proposed project. As mentioned previously, “east” and “west” refer by convention to the directions of Howard and Market Streets and parallel streets, “North” and “south” refer to the directions of Fourth and Fifth Streets and parallel streets. As shown in Figure 20, true north is about 45 degrees counter-clockwise from the Fifth Street alignment.

December 21

At 10:00 a.m. PST on December 21, new shadow would cover portions of both Minna and Mission Streets (see Figure 20). The proposed project would not shade South of Market Recreation Center to the west, Howard-Langton Mini-Park to the west, Union Square to the northeast, Boeddeker Park to the northwest, Yerba Buena Gardens to the east, or Hallidie Plaza to the north, at 10:00 a.m.

At noon (see Figure 21), new shadow from the proposed project would extend across a portion of Minna Street and extend as far as Mission Street, a portion of which would also be covered. The proposed project would not shade South of Market Recreation Center, Howard-Langton Mini-Park, Union Square, Boeddeker Park, Yerba Buena Gardens, or Hallidie Plaza, at noon.



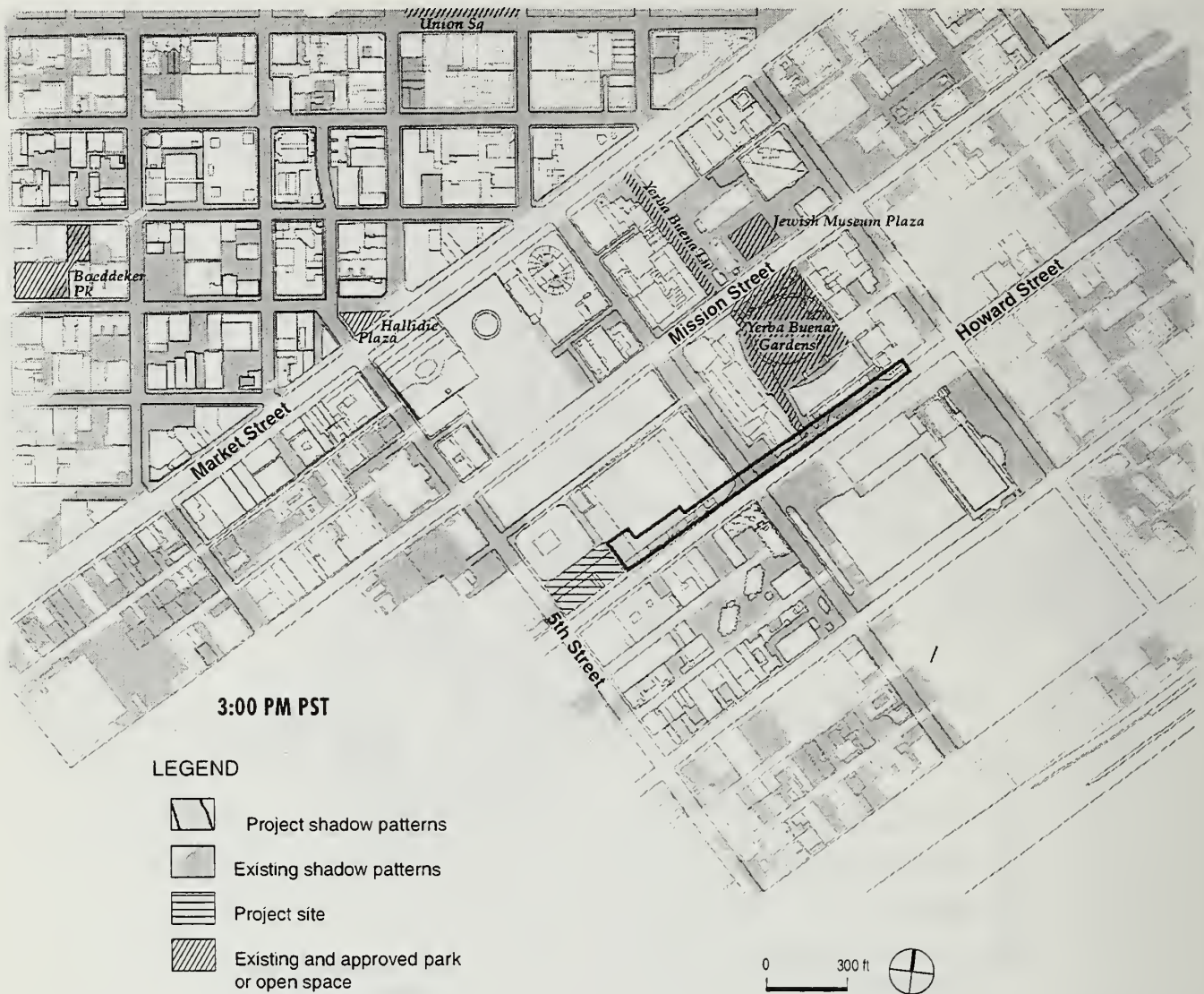
Source: CADP

PROJECT SHADOW PATTERNS—DECEMBER 21, 10AM PST FIGURE 20



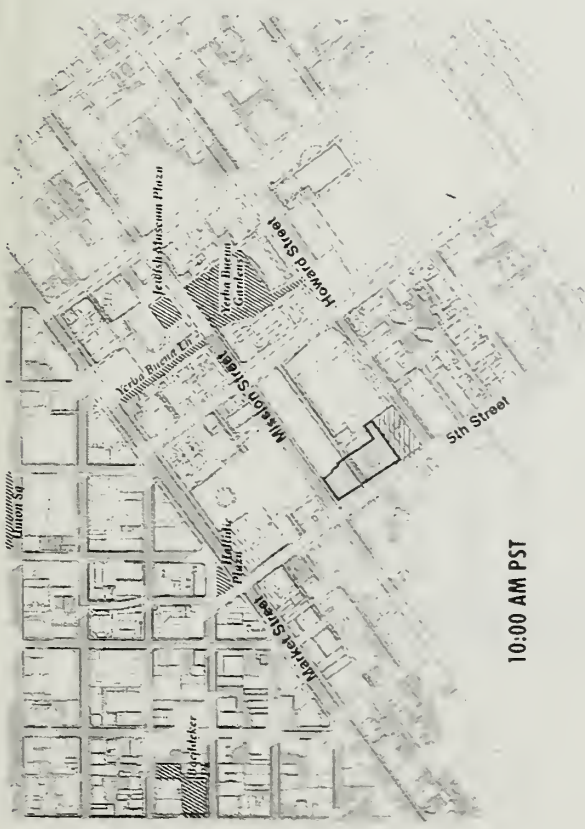
Source: CADP

PROJECT SHADOW PATTERNS—DECEMBER 21, 12 NOON PST FIGURE 21

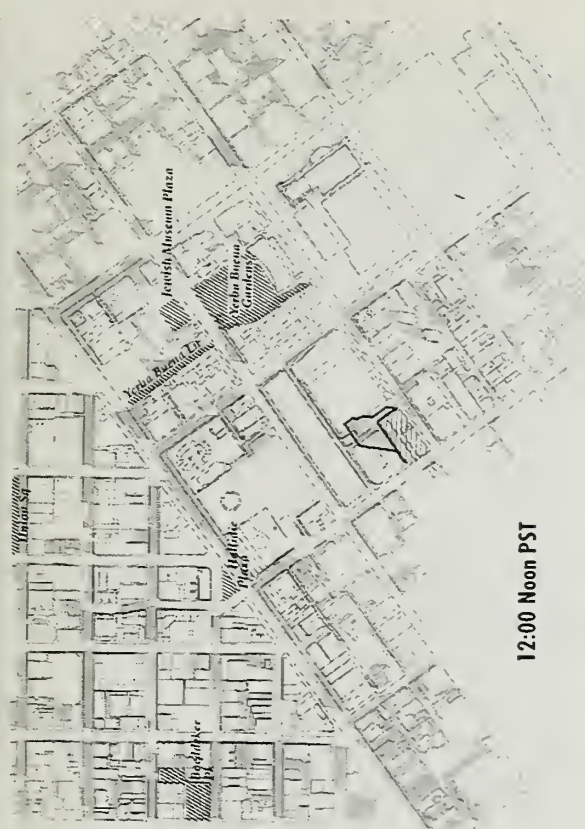


Source: CADP

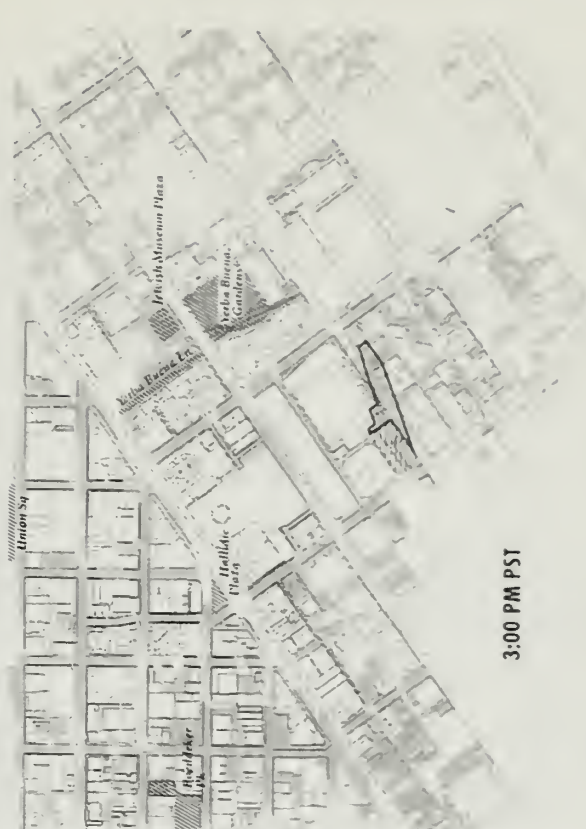
PROJECT SHADOW PATTERNS—DECEMBER 21, 3PM PST FIGURE 22



10:00 AM PST



12:00 Noon PST



3:00 PM PST

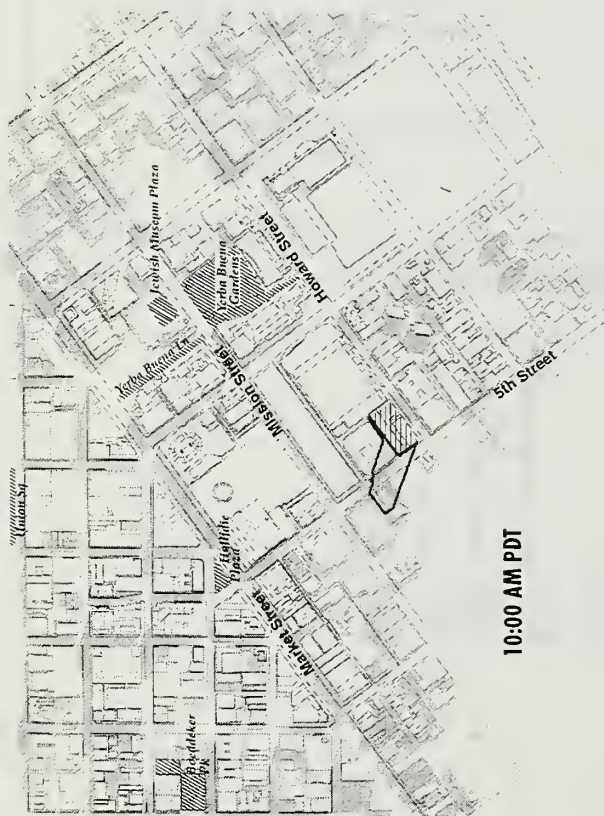
LEGEND

- Project shadow patterns
- Existing shadow patterns
- Project site
- Existing and approved park or open space



Source: CADD

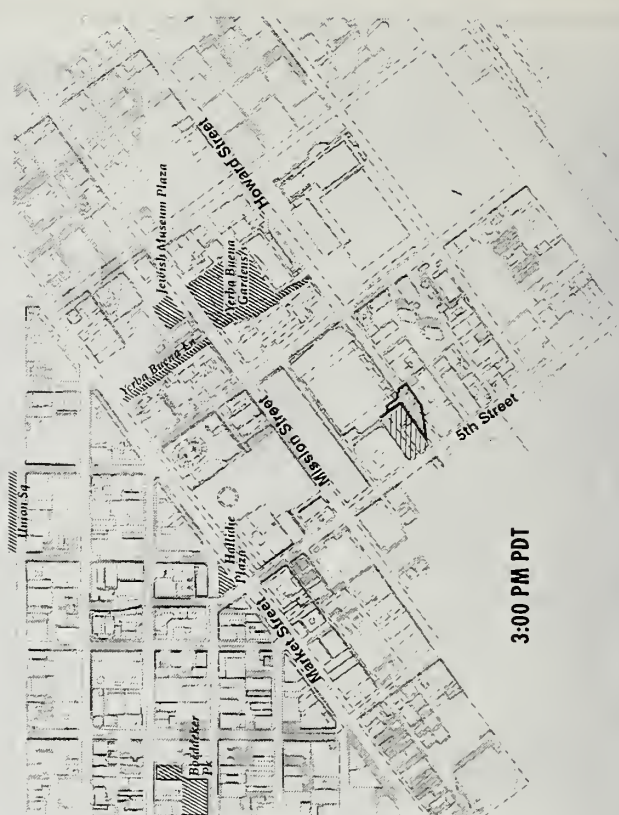
PROJECT SHADOW PATTERNS—MARCH 21 FIGURE 23



10:00 AM PDT



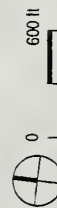
12:00 Noon PDT



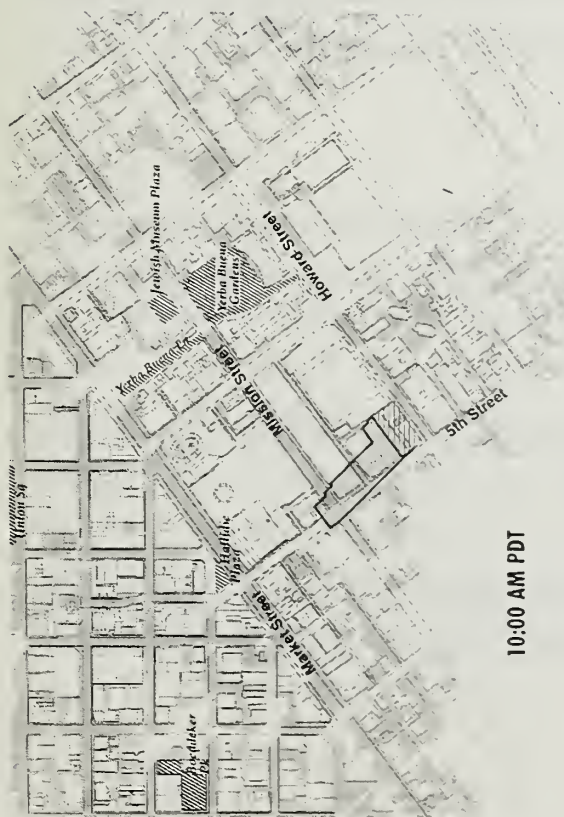
3:00 PM PDT

LEGEND

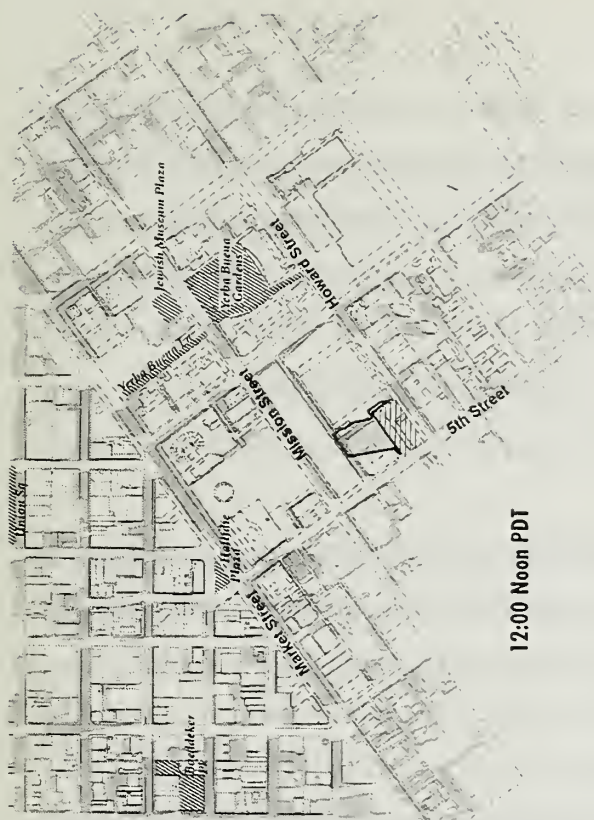
- Project shadow patterns
- Existing shadow patterns
- Project site
- Existing and approved park or open space



Source: CADD



10:00 AM PDT



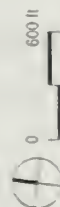
12:00 Noon PDT



3:00 PM PDT

LEGEND

- Project shadow patterns
- Existing shadow patterns
- Project site
- Existing and approved park or open space



Source: CADP

At 3:00 p.m.(see Figure 22), the proposed project would shade the north sidewalk of Howard Street between Third and Fifth Streets. This shadow would cover the southernmost portion of Yerba Buena Gardens, which consists of a narrow strip that extends south to Howard Street from the main body of the Gardens. From the relative shadow patterns at noon and 3:00 p.m., it can be inferred that shadow would pass over Yerba Buena Gardens between these hours, shading a different swath of the Gardens at any one time. The proposed project would not shade any of the other open spaces at 3:00 p.m.

March 21

At 10:00 a.m. PST on March 21, new shadow would extend over a portion of Minna Street as far as the southern sidewalk of Mission Street, which would be covered by existing shadow even without the proposed project (see Figure 23). The proposed project would not shade any of the six open spaces at 10:00 a.m.

At noon, new shadow from the proposed project would extend to the north and east, but would not shade any streets or sidewalks, or any of the six open spaces.

At 3:00 p.m., the proposed project would shade a portion of Howard Street between Fourth and Fifth Streets. The proposed project would not shade any of the six open spaces at 3:00 p.m.

June 21

At 10:00 a.m. PDT on June 21, new shadow would extend over a portion of Fifth Street northwest of the proposed project site (see Figure 24). The proposed project would not shade any of the six open spaces at 10:00 a.m.

At noon, new shadow from the proposed project would extend to the north, but would not shade any streets or sidewalks, or any of the six open spaces.

At 3:00 p.m., the proposed project would shade a portion of Howard Street between Fourth and Fifth Streets. The proposed project would not shade any of the six open spaces at 3:00 p.m.

September 21

At 10:00 a.m. PDT on September 21, new shadow would extend over portions of Fifth and Mission Streets, including the intersection of Fifth/Mission, northwest of the project site (see Figure 25). The proposed project would not shade any of the six open spaces at 10:00 a.m.

At noon, new shadow from the proposed project would extend to the north, and shade a portion of Minna Street. The proposed project would not shade any of the six open spaces at noon.

At 3:00 p.m., the proposed project would shade a portion of the north sidewalk of Howard Street between Fourth and Fifth Streets. The proposed project would not shade any of the six open spaces at 3:00 p.m.

In summary, the proposed project would not shade any open space areas owned by, or under the jurisdiction of, the Recreation and Park Department, including South of Market Recreation Center, Howard-Langton Mini-Park, Union Square, and Boeddeker Park. The proposed project also would not shade Hallidie Plaza and the Cable Car Turnaround. The proposed project would shade portions of Yerba Buena Gardens during winter afternoons. Because this shade would be limited to portions of Yerba Buena Gardens on winter afternoons, and Yerba Buena Gardens is not under the jurisdiction of the Recreation and Park Department, this impact would be considered less than significant.²

Wind

SETTING

U.S. Weather Bureau and Bay Area Air Quality Management District data show that westerly (i.e., from the west) to northwesterly winds are the most frequent and strongest winds during all seasons in San Francisco.³ Of the 16 primary wind directions measured at a Weather Bureau station at the United Nations Plaza (at a height of 132 feet), four directions occur most frequently and account for most of the strongest winds: northwest, west-northwest, west, and west-southwest. Calm conditions occur about two percent of the time. Average wind speeds are highest during summer and lowest during winter. The strongest peak winds, however, occur during winter, when speeds of up to 47 miles per hour have been

recorded.⁴ Typically, the highest wind speeds occur during the mid-afternoon hours, and the lowest occur during early morning.

Pedestrian Comfort Wind Criteria

Wind conditions affect pedestrian comfort on sidewalks and in other public areas. The comfort of pedestrians varies under different conditions of sun exposure, temperature, clothing, and wind speed. Winds up to four miles per hour have no noticeable effect on pedestrian comfort. With winds from four to eight miles per hour, wind is felt on the face. Winds from eight to 13 miles per hour disturb hair, cause clothing to flap, and extend a light flag mounted on a pole. Winds from 13 to 19 miles per hour raise loose paper, dust, and dry soil, and disarrange hair. The force of winds from 19 to 26 miles per hour is felt on the body. With 26 to 34 miles per hour winds, umbrellas are used with difficulty, hair is blown straight, walking steadily is difficult, and wind noise is unpleasant. Winds over 34 miles per hour make it difficult to maintain one's balance, and gusts can blow a person over.

Large buildings can redirect wind flows around and down to street level, resulting in increased wind speed and turbulence at street level. To provide a comfortable wind environment for San Franciscans, the City established specific comfort criteria for evaluation of proposed buildings. The *City Planning Code* specifically outlines these criteria for the Downtown Commercial (C-3) Districts and for Rincon Hill, Van Ness Avenue, and part of the South of Market Area.⁵ The project site is in the C-3-S (Downtown Commercial Support) District. The pedestrian comfort criteria in Section 148 of the *City Planning Code* are based on pedestrian-level wind speeds that include the effects of turbulence. These adjusted wind speeds are referred to as "equivalent wind speeds." Section 148 establishes an equivalent wind speed of seven miles per hour in seating areas and 11 miles per hour in areas of substantial pedestrian use as comfort criteria. New buildings and additions to buildings may not cause ground-level winds to exceed these levels more than ten percent of the time year round between 7:00 a.m. and 6:00 p.m. If existing wind speeds exceed the comfort level, new buildings and additions must be designed to reduce ambient wind speeds to meet these requirements. An exception to this requirement may be permitted but only if and to the extent that the project sponsor demonstrates that the building or addition cannot be shaped or wind baffling measures cannot be adopted without unduly restricting the development potential of the building site in question. There is no allowable exception to the hazard criterion. The pedestrian comfort criterion

is currently exceeded at nine of the 29 test locations for existing conditions near the project site as shown in Figure B-1 in Appendix B (page B-9). The highest wind conditions are on the east sidewalk of Fifth Street, at a location on the west boundary of the proposed project and at the southeast corner of Fifth and Mission Streets.

Wind Hazard Criteria

Section 148 of the *City Planning Code* also establishes as a hazard criterion an equivalent wind speed of 26 miles per hour for a single full hour per year. No building or addition would be permitted that would cause wind speeds to exceed the hazard level for more than one hour of any year.

SIGNIFICANCE CRITERIA

As noted, the *Planning Code* contains both wind comfort and hazard criteria (Section 148 and other sections, noted above). A project that would cause exceedances of the comfort standards would not be considered to have a significant impact. The hazard criterion is the significance threshold for a project that would cause equivalent wind speeds to reach or exceed 26 miles per hour for a single full hour of the year would be found to have a significant impact.

IMPACTS

Methodology

Using a wind tunnel and a scale model of the downtown San Francisco area surrounding the project site, wind speed measurements were made at 29 test locations, 28 at street level locations and on location atop the Fifth and Mission Parking Garage. Tests were conducted for the project site for base-case (existing) and with-project conditions. The test report included in Appendix B of the EIR, and Figure B-1, page B-9, shows the wind study measurement locations. The base-case conditions consisted of existing conditions on the project site, plus approved or under-construction buildings in the project vicinity including the proposed Emporium Site Hotel on Mission Street. The wind tunnel tests followed *Planning Code* Section 148 methodology, adjusted to account for the wind speed profile at the project site at Howard and Fifth Streets. Appendix B presents the wind tunnel test methodology and results. Wind speeds do not exceed

26 mph under base-case conditions. With the proposed project, wind speeds would continue to be below the 26 mph criterion i.e. the hazard criterion is not currently exceeded at any of the test locations for existing conditions.

Table B-1 in Appendix B (page B-11) lists wind speeds that would be exceeded ten percent of the time. These are points that would exceed the pedestrian comfort criteria. Because all of the test locations studied represent sidewalk or rooftop locations, the 11-mile-per-hour pedestrian comfort criterion is pertinent.

In the base case (existing conditions), wind speeds range from 7 to 20 miles per hour at the 29 locations tested, 9 of which currently exceed the 11-mile-per-hour pedestrian comfort criterion. The locations where the comfort criterion is currently exceeded on sidewalks are on the east side of Fifth Street along the project site and at the southeast corner of Fifth and Mission Streets.

Project Wind Effects

The proposed project would result in wind speeds ranging from 7 to 20 miles per hour, a range higher than existing conditions. As shown in Figure B-1 and identified in Table B-1 in Appendix B, with the project 12 of the 29 test locations would exceed the comfort criterion. In five cases, the locations where the comfort criterion is exceeded under existing conditions would continue to exceed the criterion after project construction. Seven additional locations that currently meet the criterion would exceed the criterion. At four locations that currently exceed the comfort criterion, the criterion would be met with the proposed project. A net of three new pedestrian comfort criterion exceedances would be caused by the proposed project.

The greatest changes in wind speeds on sidewalks would be increases from 11 to 17 miles per hour at the south sidewalk on Howard Street and from 11 to 20 miles per hour at the southwest corner of the project site at the intersection of Fifth and Howard Streets.

As required by the *Planning Code*, the project would include street trees planted along both the Howard and Fifth Street sidewalks. The addition of large street trees along the sidewalks could noticeably reduce

wind speeds in pedestrian areas; however, this mitigation would not necessarily provide sufficient wind speed reductions to eliminate the new exceedances of the pedestrian-comfort criterion.

With the proposed project, including the required street trees, the predicted frequency of winds would not exceed the 26 miles per hour hazard criterion.

The siting of a large structure is expected to change wind flows, speeding up the wind at some locations and slowing it down elsewhere in the vicinity. Even a moderate-size structure placed on the windy area of the project site can be expected to result in changes in the durations of criterion exceedances and changes in the locations at which those criterion exceedances occur. Experience indicates that for buildings in very windy areas it is common for new buildings to eliminate some existing exceedances and create others. Given the existing windy conditions of the site and vicinity and the magnitude of the changes in wind conditions that can reasonably be expected from a structure the size of the proposed project, it may not be possible to design any structure that fully meets the goals of the project and that fully reduces ambient wind speeds to meet Section 148 criteria at all locations in the vicinity of the site.

In summary, the proposed project is located in an area with moderate existing wind conditions. The proposed project would not create new wind hazard exceedances.

NOTES - Shadows and Wind

¹ The shadows cast by the proposed project would only affect public open spaces on December 21st and the times are shown in larger figures for easier review. The other days and times are shown in smaller scale, one day per page.

² The new Moscone West Convention Center adjacent to the proposed project is considering the use of photovoltaic cells on the roof. The amount of existing shadow is about 2.63 percent of the total square-foot hours (sfh) of sunlight available, and the proposed project would add approximately 0.23 percent sfh. Thus, the proposed project would not have a significant effect on the amount of sunlight available to power the photovoltaic cells. The actual use of photovoltaic cells is still in the planning stage and other considerations such as San Francisco weather patterns, layout of the cells, and cost-benefit are still under study. The calculations of existing and project shadow are available for public review in file No. 2000.790 at the Planning Department, 1660 Mission Street, Fifth floor.

³ The U.S. Weather Bureau data used in this analysis were gathered at a weather station atop the Old Federal Building at 50 United Nations Plaza during the years 1945 through 1950. During each of these years, data were taken hourly for 16 wind directions. The database, consisting of 32,795 hourly observations, is of sufficient size to

provide a reliable estimate of future wind conditions in San Francisco.

⁴ E. Jan Null, *Climate of San Francisco*, NOAA Technical Memorandum, *NWS WR-126*, February 1978.

⁵ *City Planning Code*, Sections 148, 249.1(b)(3), 243(c)(9), 263.11(c).

D. TRANSPORTATION

A transportation study for the proposed project was conducted by Wilbur Smith Associates.¹ The results are summarized in this section.

Setting

ROADWAY NETWORK

The project site is located in the South of Market area of downtown San Francisco, in the block bounded by Minna Street to the north, Fifth Street to the west, Howard Street to the south, and Fourth Street to the east (Figure 1, page 16: Site Location). These streets provide local access to and from the site. As mentioned above, in the South of Market area, streets that run in the northwest/southeast direction are generally considered north/south streets, and streets that run in the southwest/northeast direction are generally considered east/west streets.

Highways. Two regional freeways provide the primary regional access to the project site. Interstate 80 (I-80), located about two blocks south of the project site, connects San Francisco to the East Bay and points east via the San Francisco-Oakland Bay Bridge. U.S. Highway 101 (U.S. 101) serves San Francisco and the Peninsula/South Bay, and extends north via the Golden Gate Bridge to the North Bay. U.S. 101 and I-80 merge south of the project site. Nearby eastbound access is provided at the Fifth/Bryant on-ramp and at the Fourth/Bryant off-ramp. Nearby westbound access is provided at the Fourth/Harrison on-ramp and at the Fifth/Harrison off-ramp. In addition to U.S. 101 and I-80, the third regional freeway, Interstate 280 (I-280), provides regional access from the South of Market area to southern San Francisco, the Peninsula, and the South Bay. I-280 has an interchange with U.S. 101 south of the project area. Access to I-280 is via on- and off-ramps at the intersection of Sixth/Brannan.

Market Street. Market Street is a two-way arterial that runs between The Embarcadero to the east and Portola Drive to the west. In the downtown area, Market Street runs in a northeast-southwest direction (east-west by the convention used in this EIR). In the vicinity of the project site, Market Street has two lanes in each direction. West of Fifth Street, one of the travel lanes in each direction is reserved for transit vehicles only. In the San Francisco *General Plan*, Market Street is designated as a Transit Conflict Street in the Congestion Management Program (CMP) Network, a Transit Preferential Street (transit oriented), a Citywide Pedestrian Network Street and a Neighborhood Commercial Street. In addition, Market Street is part of the #50 bicycle route.

Mission Street. Mission Street is a four-lane arterial that runs in the east-west direction between The Embarcadero and Van Ness Avenue, and continues in the north-south direction west of Van Ness Avenue. In the vicinity of the project site, left turns from Mission Street are prohibited except for buses and taxis. In the westbound direction, one of the travel lanes is dedicated as a right-turn/bus-only lane between Main and Fourth Streets during weekdays, and between Fourth and Eleventh Streets during weekday P.M. peak periods. In the eastbound direction, one of the travel lanes is dedicated as a right-turn/bus-only lane between Eleventh and Fifth Streets during weekday A.M. peak periods, and between Fifth and Beale Streets during weekdays. Metered parking is generally provided on both sides but prohibited during A.M. and P.M. peak periods. In the San Francisco *General Plan*, Mission Street is designated as a Transit Preferential Street (transit oriented), a Citywide Pedestrian Network Street and a Neighborhood Commercial Street.

Howard Street. Howard Street is an east-west roadway between The Embarcadero and South Van Ness Avenue. In the vicinity of the project site, Howard Street is a one-way arterial with four travel lanes in the westbound direction. In the downtown area, Howard Street forms a one-way couplet with Folsom Street (located one block to the south). Adjacent to the project site, on-street metered parking is provided on both sides but prohibited on the north curb during the weekday P.M. peak period to provide an additional travel lane. In the San Francisco *General Plan*, Howard Street is designated as a Major Arterial in the CMP Network, a Metropolitan Transportation System (MTS) Network Street, and is part of the #30 bicycle route.

Folsom Street. Folsom Street runs in the east-west direction between The Embarcadero and South Van Ness Avenue, and continues in the north-south direction between South Van Ness Avenue and Ripley Street (south of Cesar Chavez Street). In the downtown area, Folsom Street forms a one-way couplet with Howard Street. In the vicinity of the project site, Folsom Street is a one-way eastbound roadway with four travel lanes, with on-street metered parking provided on both sides of the street. In the San Francisco *General Plan*, Folsom Street is designated as a Major Arterial in the CMP Network and an MTS Street. Folsom Street is part of the #30 bicycle route, and a bicycle lane is provided on the south side of the street.

Harrison Street. Harrison Street runs in the east-west direction between The Embarcadero and South Van Ness Avenue, and continues in the north-south direction between South Van Ness Avenue and Norwich Street (south of Cesar Chavez Street). Harrison Street is a two-way roadway between The Embarcadero and Third Street, and is a one-way westbound roadway between Third Street and Tenth Street. On-street metered parking is generally provided on both sides of the street. In the San Francisco *General Plan*, Harrison Street is designated as a Major Arterial in the CMP Network, an MTS Street, and a Transit Preferential Street (transit important).

Third Street. Third Street is the principal north-south arterial in the southeastern section of San Francisco, running between U.S. 101 (near the San Francisco/San Mateo county line) to Market Street. At Market Street, Third Street continues to the north as Kearny Street. In the vicinity of the project site, Third Street operates one-way northbound and has four travel lanes. On-street parking is generally provided on both sides of the street, but is prohibited in the right lane during the weekday A.M. and P.M. peak periods between Bryant and Mission Streets, and is prohibited in the left lane between Howard and Mission Streets during the same periods. In the San Francisco *General Plan*, Third Street is designated as a Major Arterial in the CMP Network, an MTS Street, a Transit Preferential Street (transit important), and a Neighborhood Commercial Street.

Fourth Street. Fourth Street is a north-south roadway between Market Street and Third Street. North of Market Street, Fourth Street connects with Stockton Street and Ellis Street. Between Market and Townsend Streets, Fourth Street is one-way southbound with four travel lanes. In the vicinity of the project site, Fourth Street has on-street metered parking on both sides. In the San Francisco *General Plan*, Fourth

Street is designated as a Major Arterial in the CMP Network, an MTS Street, a Transit Preferential Street (transit important), and a Neighborhood Commercial Street.

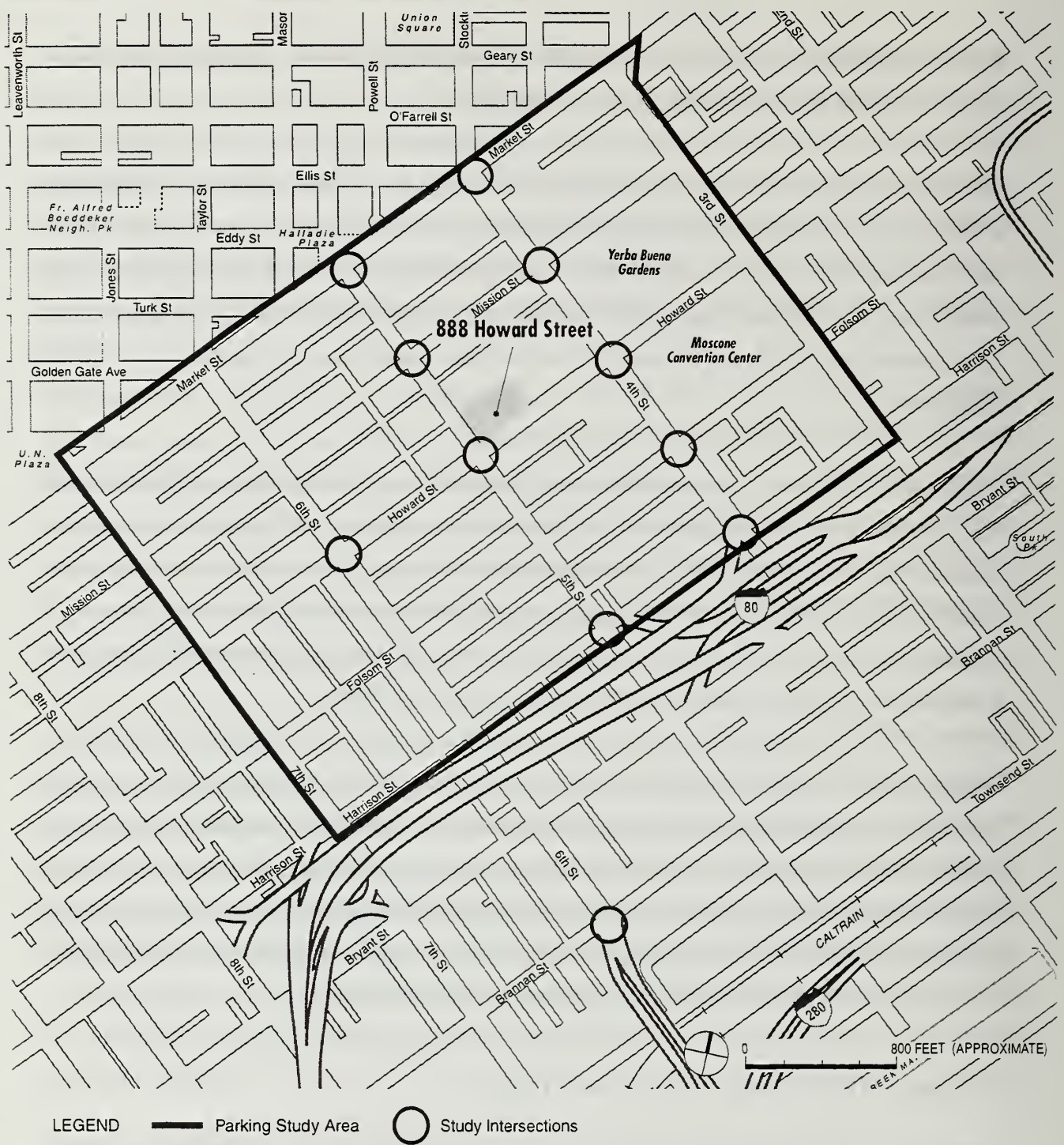
Fifth Street. Fifth Street is a north-south roadway between Market Street and Townsend Street. North of Market Street, Fifth Street becomes Cyril Magnin Street. Fifth Street operates both northbound and southbound and has two lanes in each direction. Adjacent to the project site, Fifth Street has on-street metered parking. In the San Francisco *General Plan*, Fifth Street is designated as a Major Arterial in the CMP Network, an MTS Street, a Transit Preferential Street (transit important), and is part of the #19 bicycle route.

Sixth Street. Sixth Street is a north-south roadway operating between Market Street and Brannan Street, where it turns into on- and off-ramps for I-280. North of Market Street, Sixth Street connects with Taylor Street and Golden Gate Avenue. Sixth Street operates both northbound and southbound and has two lanes in each direction. On-street metered parking is generally provided on both sides, although parking is prohibited on the east side during the P.M. peak period. In the San Francisco *General Plan*, Sixth Street is designated as a Major Arterial in the CMP Network and an MTS Street.

Seventh Street. Seventh Street runs in the north-south direction between Sixteenth and Market Streets, and connects with McAllister Street to the north of Market Street. North of Brannan Street, Seventh Street operates one-way northbound. In the vicinity of the project site, Seventh Street has four travel lanes and on-street metered parking on both sides. In the San Francisco *General Plan*, Seventh Street is designated as a Major Arterial in the CMP Network and an MTS Street. In addition, Seventh Street is part of the #23 bicycle route, and a bicycle lane is provided on the east side of the street.

INTERSECTION OPERATING CONDITIONS

Levels of service (LOS) were calculated for the eleven study intersections based on the *Highway Capacity Manual (HCM)* methodology (1994 Update) (see Figure 26: Transportation Study Area on page 68). Levels of service are ranked descriptors of traffic flow conditions within an intersection, based on the average delay per vehicle. The levels of service range from LOS A, which indicates free-flowing



TRANSPORTATION STUDY AREA FIGURE 26

conditions, to LOS F, indicating extremely long delays in passing through the intersection. The City of San Francisco considers LOS A through D to be acceptable traffic conditions at an intersection, while LOS E and F are considered unacceptable. Definitions of the levels of service are presented in Appendix C

Existing levels of service during the weekday P.M. peak hour at the study intersections in the vicinity of the project site range from LOS C to LOS F, as shown in Table 1. Eight of the study intersections currently operate at acceptable levels of service (LOS D or better), while the intersections of Folsom/Fourth and Brannan/Sixth operate at LOS E, with average delays in excess of 40 seconds, and the intersection of Harrison/Fourth operates at LOS F, with average delays in excess of 60 seconds. In general, the poor operating conditions at the three intersections that operate at LOS E or F are due to the high volume of traffic destined to and from the regional freeway network (I-80/U.S. 101 eastbound and westbound and I-280 southbound). At the intersection of Folsom/Fourth, the critical movements are in the southbound-through direction; at the intersection of Harrison/Fourth, the critical movements are in the southbound-through and westbound-right directions; and at the intersection of Brannan/ Sixth, the critical movements are in the northbound-through and eastbound-right directions.

<p style="text-align: center;">Table 1 Intersection Levels of Service Existing Conditions</p>				
Intersection	Control	Delay	LOS	v/c
Market/Fifth	Signal	26.0	D	-
Market/Fourth	Signal	18.0	C	-
Mission/Fifth	Signal	23.7	C	-
Mission/Fourth	Signal	20.0	C	-
Howard/Sixth	Signal	18.2	C	-
Howard/Fifth	Signal	33.8	D	-
Howard/Fourth	Signal	38.1	D	-
Folsom/Fourth	Signal	44.4	E	0.99
Harrison/Fifth/I-80	Signal	29.4	D	-
Harrison/Fourth/I-80	Signal	>60	F	1.16
Brannan/Sixth/I-280	Signal	44.9	E	0.94

Notes:

Delay presented in seconds per vehicle.

v/c = volume-to-capacity ratio (presented for intersections operating at LOS E or F)

Source: Wilbur Smith Associates, February 2001

During the evening commute hours, the on-ramps to eastbound I-80 (to the Bay Bridge), westbound I-80 (to U.S. 101 and the South Bay) and southbound I-280 (to the Peninsula and South Bay) are typically congested. As a result of high volumes and traffic bottlenecks, the capacity of the on-ramps is restricted and queues form along the major approaches. These queues can affect traffic conditions along Fourth, Fifth, and Sixth Streets, as they serve as the primary routes to the freeway network. Depending on the level of congestion on the freeways, traffic congestion and queues typically extend north past Folsom Street. However, during evenings with severe congestion on the freeways, queues may extend further upstream towards Mission and Market Streets. In addition, congestion along Fourth, Fifth and Sixth Streets also affects traffic operations on the adjacent east-west streets, such as Howard and Folsom Streets.

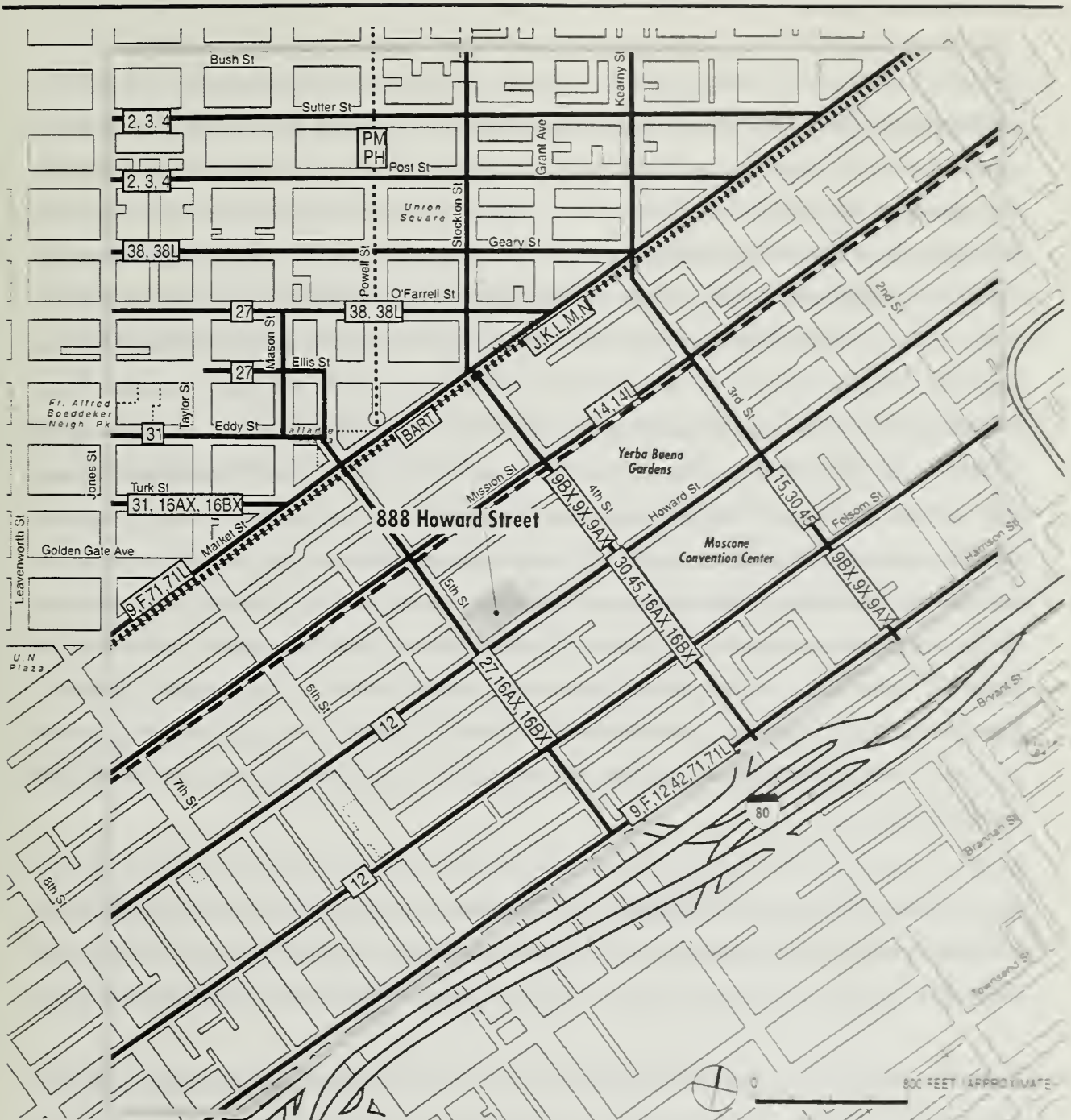
It should be noted that the San Francisco Department of Parking and Traffic (DPT) is considering the creation of bicycle lanes on Fifth Street, a transit only lane on Fourth Street, and Muni is considering the enhanced enforcement of the transit-only lanes on Mission Street. The effects of these proposals would be analyzed as part of the ongoing Fifth & Mission Garage Expansion study.

TRANSIT NETWORK

The project area is served by Muni, BART, Golden Gate Transit and SamTrans. The public transit routes serving the project site are shown in Figure 27, page 71.

San Francisco Municipal Railway (Muni). The project site is well served by Muni, with 25 bus, one streetcar, five light rail, and two cable car lines passing within two blocks of the site. Morning and afternoon headways on these lines range from four to 20 minutes, and midday headways range from six to 20 minutes.

The availability of Muni service capacity was analyzed in terms of a series of screenlines. The concept of screenlines is used to describe the magnitude of travel to or from the greater downtown area, and to compare estimated transit volumes to available capacities. Screenlines are hypothetical lines that would be crossed by persons traveling between downtown and its vicinity and other parts of San Francisco and the region. Four screenlines have been established in San Francisco: Northeast, Northwest, Southwest,



LEGEND

Transit Network
Study Area

MUNI Bus
Streetcar

MUNI Metro
BART

Golden Gate
Transit SamTrans

Cable Car

Source: Wilbur Smith Associates

EXISTING TRANSIT NETWORK FIGURE 27

and Southeast, with sub-corridors within each screenline. For purposes of analysis, Muni ridership measured at the four San Francisco screenlines and sub-corridors represents the peak direction of travel and patronage loads for the Muni system, which corresponds with the evening commute in the outbound direction from the downtown area to other parts of San Francisco. Capacity utilization, which relates the number of passengers per transit vehicle to the design capacity of the vehicle, is used to measure the amount of available space within each screenline. In contrast to other transit systems, Muni has established a capacity utilization service standard of 100 percent which includes seated and standing capacity. Thus, Muni screenlines and sub-corridors at or near 100 percent of capacity operate under noticeably crowded conditions with many standees. Because each screenline and most sub-corridors include multiple lines, each with several vehicles during the peak hour, some individual transit vehicles operate at or above 100 percent of capacity and are extremely crowded, while others operate under less crowded conditions. In common with other types of transportation operations such as roadways and parking facilities, transit operators may experience substantial problems in service delivery well short of established service capacity standards. Currently, P.M. peak period trips are fairly evenly distributed among the four screenlines. Capacity utilization of each screenline is between 62 and 93 percent. Overall, all sub-corridors are currently operating below the level of service standard and have available capacity to accommodate additional passengers.

Bay Area Rapid Transit District (BART). BART operates a network of regional rail transit service that includes five rail lines covering a wide area of Alameda, Contra Costa, and San Francisco Counties. The closest BART station to the project site (Powell Station) is located about 0.2 mile north of the project site.

Caltrain. Caltrain is a commuter train that provides service between San Francisco and Gilroy, about 25 miles south of San Jose. The Caltrain station is located about 0.8 mile southeast of the project site at 4th and Townsend.

San Mateo County Transit District (SamTrans). SamTrans provides bus transportation between San Francisco and the South Bay. SamTrans routes include stops at the Transbay Terminal (about 0.8 mile northeast of the project site) and along Mission Street.

Golden Gate Transit. Golden Gate Transit provides bus service to the North Bay from the Transbay Terminal, and ferry service to the North Bay from the Ferry Building at The Embarcadero and Market Street.

Alameda-Contra Costa Transit District (AC Transit). Primarily a service provider in the East Bay to communities in western Alameda and Contra Costa Counties, AC Transit also provides express bus service between the East Bay and the Transbay Terminal in downtown San Francisco.

Regional Transit Screenline Analysis. A screenline analysis similar to that described in San Francisco Municipal Railway (Muni), above, was performed for the regional transit carriers (AC Transit, BART, Caltrain, Golden Gate Transit and SamTrans), using three screenlines: East Bay, North Bay, and South Bay. As with the Muni analysis, ridership measured at the three screenlines represents the peak direction of travel and patronage loads, which corresponds with the evening commute in the outbound direction from downtown San Francisco to the region. Capacity utilization was used to determine available space. All regional transit operators base capacity on number of seated passengers, and all except BART use a load factor standard of 100 percent. BART has a three-hour performance standard of 115 percent, which indicates that all seats are full and an additional 15 percent of the seating capacity are standees.

All regional transit providers operate at less than their design capacity, which indicates that seats are generally available. All of the regional transit providers, except for BART, currently operate at a load factor of less than 1.0. BART currently operates at a three-hour load factor of 112 percent, which is slightly less than the standard of 115 percent.

OFF-STREET PARKING

Surveys of the off-street parking supply in the project vicinity were conducted in August 1999 and updated in December 2000, in an area generally bounded by Third Street to the east, Harrison Street to the south, Seventh Street to the west, and Market Street to the north. There are 22 public parking facilities in the study area, providing about 6,127 parking spaces. During the weekday midday period, these facilities operate at an average of 84 percent of capacity. It should be noted that during major events at the Moscone

Center and during the holiday shopping season, parking occupancy is typically 100 percent of most of the nearby parking facilities.

ON-STREET PARKING

In general, on-street parking in the vicinity of the project site is mostly comprised of short-term, metered spaces. In addition, there are yellow loading zones and white passenger loading zones located near businesses. Along several of the nearby streets (including Mission, Howard, and Third Streets), on-street parking is prohibited during the peak periods to provide additional roadway capacity. Adjacent to the project site, on-street parking is provided on Fourth, Fifth, and Howard Streets. It should be noted, however, that on the east side of Fifth Street between Howard and Mission Streets, no on-street parking is provided to allow additional queuing space for access to the Fifth & Mission Garage. In addition, parking is prohibited along portions of Minna Street. Overall, on-street parking is well-utilized (between 90 and 100 percent) throughout the day, with high turnover. Parking occupancy is somewhat lower in the evening and overnight.

PEDESTRIAN CONDITIONS

In general, pedestrian volumes in the vicinity of the project site are relatively high, especially during the midday and evening periods. Pedestrian volumes are the highest along Market and Mission Streets (which have wider sidewalks), and are lower along the streets to the south. Overall, most sidewalks and crosswalks in the area operate with acceptable conditions, with pedestrians typically moving with somewhat restricted walking speeds. During the summer tourist and holiday shopping seasons and major events at Moscone Center, pedestrian volumes are higher, with correspondingly higher pedestrian congestion.

During field visits, it was observed that there is a higher potential for pedestrian/vehicle conflicts during the weekday P.M. peak period at two nearby intersections. At the intersection of Mission and Fourth Streets, there are high volumes of vehicles turning right and left from southbound Fourth Street and turning right from eastbound Mission Street. Turning vehicles must wait for gaps in the pedestrian flows, but the number and duration of gaps are limited due to the high pedestrian volumes. As a result, vehicles often

have difficulty turning and queues can develop at the approaches. At the intersection of Mission and Fifth Streets, there is a free-turn for the northbound right-turn movement, with a small island for pedestrians. With the high volume of traffic using this free turn, pedestrians can have a difficult time crossing between the island and the corner.

Since the time this report was written, the pedestrian facilities have changed. At the intersection of Fourth/Mission, the four crosswalks have recently been widened and a pedestrian countdown signal (a time signal which shows the remaining seconds before signal change) has been installed.

BICYCLE CONDITIONS

In the vicinity of the project site, bicycle facilities have been established on several roadways, including Market Street (#50 – bike route), Howard Street (#30 – wide curb lane bike route), Folsom Street (#30 – bike lane), Fifth Street (#19 – bike route), and Seventh Street (#23 – bike lane). In general, during both the weekday midday and evening periods, bicycle conditions were observed to be operating acceptably, with only minor issues between bicycles, pedestrians and vehicular traffic. However, some conflicts occur along Fourth and Fifth Streets as a result of the vehicles queued to the I-80/U.S. 101 on-ramps. Adjacent to the project site, both Fifth and Howard Streets are part of bicycle routes. The wide curb lane on Howard Street is on the southern side of the street. The San Francisco Bicycle Plan, adopted in 1999, proposed establishment of a number of bicycle lanes in the South of Market area, including Fifth Street between Market and Townsend Streets. Currently, the San Francisco Department of Parking and Traffic is considering establishing both northbound and southbound bicycle lanes on Fifth Street. The potential reconfiguration of the streets to accommodate the bicycle lanes (including the loss of on-street parking and/or vehicular travel lanes) is being evaluated as part of the on-going Fifth & Mission Garage Expansion project.

Significance Criteria

Within San Francisco, the threshold for a significant adverse impact on traffic has been established as the deterioration in level of service at a signalized intersection to LOS E or F, including a deterioration from

LOS D or better to LOS E or F, or from E or F to a worse LOS E or F. In addition, a project would have a significant adverse effect if it would create major traffic hazards, or would contribute considerably to cumulative traffic increases that would cause a deterioration in levels of service to unacceptable levels.

For transit effects, a project would have a significant effect if it would cause a substantial increase in transit demand that cannot be accommodated by existing or proposed transit capacity, resulting in unacceptable levels of transit service. The project would also have a significant effect if, when considering cumulative development in the area, it would contribute substantially to the deterioration of transit service or cause substantial conflict with transit operations.

Regarding parking, it is City policy to emphasize the importance of public transit use and discourage the provision of facilities that encourage automobile use. Therefore, an increase in parking demand generated by a project alone would not be considered a significant environmental impact even if the increased demand cannot be met by existing or proposed parking facilities.

With respect to pedestrian or bicycle impacts, if a project would result in substantial pedestrian overcrowding on public sidewalks or crosswalks, create hazardous conditions for pedestrians or bicyclists, or otherwise substantially interfere with pedestrian and bicycle accessibility, it would be considered to have a significant effect.

Project Impacts

TRAVEL DEMAND

Trip generation rates were based on the San Francisco Planning Department's *Interim Transportation Impact Analysis Guidelines (SF Guidelines)*, published in January 2000. Employee, resident, and visitor activity at the proposed project site would generate approximately 4,996 new person trips on a weekday daily basis. Approximately 552 of these trips would be generated during the P.M. peak hour. About 35 percent of the weekday P.M. peak hour person-trips would be inbound to the site and about 65 percent would be outbound.

The 552 peak-hour person-trips were broken down by travel mode. Mode split data for residential uses was based on 1990 U.S. Census journey-to-work data for the census tract containing the project site, and the mode split for the proposed hotel, restaurant, and retail uses was based on mode split information from the *SF Guidelines* for the C-3 district. An average vehicle occupancy, from the *SF Guidelines* or U.S. Census data, was used to convert person-trips by auto into vehicle trips. Of the 552 person-trips generated by the proposed project, approximately 30 percent (168 person trips) would be made by automobile, 44 percent (240 trips) trips would be made by transit, and 26 percent (143 trips) would be made by walking, bicycle, motorcycle, taxi or other modes. The 168 weekday P.M. peak hour auto person-trips would correspond to 115 vehicle trips, of which 30 percent would be inbound to the site and 70 percent would be outbound.

The weekday P.M. peak hour vehicle trips generated by the existing parking facility on the site were not subtracted from project vehicle trip generation, because the existing vehicle trips would remain within the adjacent area and would continue to travel through the study area intersections.

TRIP DISTRIBUTION

Distribution of project-generated trips was based on origin/destination of each trip, separated into the four quadrants of San Francisco (Superdistricts 1 through 4), East Bay, North Bay, South Bay, and Out of Region. Most trips generated by the proposed project would occur within San Francisco, with smaller percentages to and from the other areas. These distribution patterns were then used to assign project-related vehicle trips to local streets, and transit trips to transit operators.

TRAFFIC IMPACTS

The proposed project would generate 34 inbound and 81 outbound vehicle-trips during the weekday P.M. peak hour. To determine the effect of project-generated vehicle trips when added to the existing traffic on local roadways, project-generated traffic was distributed on the local traffic network and then combined with the existing traffic volumes to derive the Existing Plus Project traffic volumes. These volumes were used to derive the Existing Plus Project levels of service presented in Table 2 on page 78. Overall, the addition of project-generated traffic would result in minor increases in the average delay per vehicle at the study intersections, and all intersections would continue to operate at the same service levels as under existing conditions, with the exception of Mission/Fifth, which would worsen from LOS C to LOS D. At

the three study intersections that currently operate at LOS E and F conditions, the proposed project would result in minor changes to the average delay per vehicle. Because the proposed project would not cause the level of service at any of the intersections to deteriorate from Los D or better to LOS E or F, or from LOS E or F to a worse E or F, implementation of the proposed project would not create any significant impacts on traffic conditions in the study area.

TRANSIT IMPACTS

The proposed project would generate 240 transit trips (approximately 70 inbound and 170 outbound) during the weekday P.M. peak hour. These transit trips would use nearby Muni lines and regional transit lines, and may include transfers to other Muni lines or other regional transit lines. Based on the location of the project site and the origin/destination of the residents, employees and visitors of the proposed project, transit trips were assigned to Muni and the various regional transit providers.

Table 2 Intersection Levels of Service Existing and Existing Plus Project Conditions						
Intersection	Existing			Existing Plus Project		
	Delay	LOS	v/c	Delay	LOS	v/c
Market/Fifth	26.0	D	--	26.1	D	--
Market/Fourth	18.0	C	--	18.2	C	--
Mission/Fifth	23.7	C	--	25.7	D	--
Mission/Fourth	20.0	C	--	20.6	C	--
Howard/Sixth	18.2	C	--	18.3	D	--
Howard/Fifth	33.8	D	--	36.3	D	--
Howard/Fourth	38.1	D	--	38.9	D	--
Folsom/Fourth	44.4	E	0.99	45.3	E	1.00
Harrison/Fifth/I-80	29.4	D	--	32.8	D	--
Harrison/Fourth/I-80	>60	F	1.16	>60	F	1.17
Brannan/Sixth/I-280	44.9	E	0.94	45.8	E	0.95

Notes:

Delay presented in seconds per vehicle.

v/c = volume-to-capacity ratio (presented for intersections operating at LOS E or F)

Source: Wilbur Smith Associates, February 2001

Analysis of Muni impacts focused on the increase in transit patronage in the outbound (away from downtown) direction during the weekday P.M. peak hour, as the majority of transit patrons during this time period are traveling away from downtown San Francisco. It was estimated that about 70 percent of the project-generated outbound transit trips would use Muni, and were assigned to the four screenlines and sub-corridors based on the trip distribution patterns. Overall, the addition of the project-generated riders to the screenlines and sub-corridors would not substantially increase the peak hour capacity utilization. Capacity utilization for all screenlines would remain similar to that under existing conditions, and all screenlines and sub-corridors would continue to operate below the Muni capacity utilization standard of 100 percent. The proposed project would create one new driveway on Fifth Street to serve the residential uses, which would generate about 15 weekday P.M. peak hour vehicle trips. This would not substantially affect operations of the three Muni lines that operate on Fifth Street.

Similar to the analysis of Muni impacts, the analysis of regional transit impacts focused on the increase in transit patronage in the outbound direction during the weekday P.M. peak hour, as the majority of transit patrons during this time period are traveling away from San Francisco. Regional trips were assigned to the three regional screenlines based on the origin or destination of each trip. In general, the addition of the project-generated riders would not have a substantial effect on the regional transit providers during the weekday P.M. peak hour, as the capacity utilization for all screenlines would remain the same as under existing conditions. The capacity utilization of all regional transit providers would be under their capacity utilization standards. Although BART to the East Bay would operate at over 120 percent of capacity during the weekday P.M. peak hour, the three-hour load factor would be 112 percent, slightly less than the standard of 115 percent.

PARKING IMPACTS

The proposed project would supply 100 (attendant) parking spaces for the proposed hotel component and 67 self-park spaces for the proposed residential units. In addition, the hotel parking garage and the residential parking garage would each have six bicycle parking spaces (for a total of 12 spaces)

Because the proposed project would be located within the C-3 District of San Francisco, the San Francisco *Planning Code* does not require the provision of off-street parking for any land use except dwelling units, for which one space per four units would be required, or 17 total spaces. Since the proposed project would exceed the *Planning Code* requirement for the residential component of the project, it would need to seek a Conditional Use permit. The proposed parking supply for the hotel component of the proposed project would be within the limits of accessory parking permitted by the *Planning Code*.

Parking demand consists of both long-term demand (including hotel guest, residential and employee parking) and short-term demand (typically visitor and patron parking). The estimated long-term parking demand for the proposed project was based on methodology prescribed in the *SF Guidelines*. The proposed hotel, restaurant, retail, and residential uses would generate a total parking demand of about 288 spaces, of which 272 spaces would be long-term demand and 16 spaces would be short-term demand. Of this demand, 181 spaces would be related to the hotel, 20 would be related to the retail/restaurant, and 87 would be related to the residential units. There would be a shortfall of 81 spaces for the hotel, 20 spaces for the retail/restaurant, and 12 spaces for the residential units.

In addition, the proposed project would result in the elimination of the 100-space surface parking lot on the project site that is currently being used by employees of the adjacent Wells Fargo Data Center. As a result, the vehicles that are parked in this lot would need to find parking at one of the nearby facilities. The overall parking shortfall for the proposed project would be 213 spaces.

The public off-street parking facilities in the vicinity operate at about 84 percent of capacity during the weekday midday (see Off-Street Parking, above), with almost 1,000 parking spaces available during this period (primarily within the adjacent Fifth & Mission Garage). Therefore, there should be sufficient public parking in the nearby vicinity to accommodate the proposed project's parking demand. It should be noted that the peak parking demand for hotel and residential uses typically occurs overnight, during which there would be additional parking spaces available within the public parking facilities and on-street. Overall, the proposed project would not have a significant effect on area-wide parking conditions.

The project sponsor proposes to establish a 60-foot taxi queuing area along the Howard Street frontage of the project site, which would eliminate about three metered parking spaces. It is not anticipated that this would substantially affect area-wide parking conditions.

Although the parking effects of the proposed project would not be considered significant impacts and mitigation measures are not required, the following improvement measures would assist in reducing the potential parking shortfall associated with the proposed project and will be proposed as “Conditions of Approval” for the project:

- The project sponsor would make arrangements at a nearby parking facility to provide a certain number of overnight parking spaces for hotel guests and residents.
- Prospective tenants of the proposed residential units would be informed that the project includes limited parking, and that the City will not implement a Residential Permit Parking program in this commercial area.
- The project sponsor would provide reduced-rate or free transit passes to encourage employees to use alternate means of travel.
- The project sponsor would provide on-site transit information, and provide transit maps and directions at the project’s website (if available).
- The project sponsor has agreed to contribute funding to the new Integrated Transportation Management System (ITMS), and for electronic signage to guide drivers to available parking spaces.

PEDESTRIAN IMPACTS

Pedestrian trips generated by the proposed project would include walk trips to and from the proposed project, plus walk trips to and from nearby parking facilities and transit operators. Overall, the proposed project would generate about 400 pedestrian trips to the surrounding streets during the weekday P.M. peak hour. These pedestrian trips would be entering and exiting the proposed project at the hotel lobby and restaurant entrance on the Howard Street frontage and the residential lobby and retail entrance on the Fifth Street frontage. Adjacent to the project site, the sidewalks on Howard Street would be 12 to 15 feet wide, and the sidewalk on Fifth Street would be 100 feet wide.

The project-generated pedestrian trips would be dispersed throughout the study area, depending on the origin/destination of each trip. It is anticipated that most of the new pedestrian trips during this time period would be to and from the adjacent Moscone West and the major downtown destination areas, such as Market Street and Union Square, and to and from the transit lines on Market Street (Muni, Muni Metro and BART).

Pedestrian conditions in the vicinity of the project site are generally satisfactory, with pedestrians typically moving at somewhat restricted walking speeds. Overall, it is anticipated that the project-generated pedestrian trips could be accommodated within the existing sidewalks and crosswalks adjacent to the project site and would not substantially affect the current pedestrian conditions.

Table 3 presents the actual width and effective width for the north sidewalk of Howard Street and the east sidewalk of Fifth Street, plus the maximum number of pedestrians per hour that could use the sidewalk and maintain a pedestrian level of service of LOS D. During an hour, there could be up to 6,000 pedestrians on Howard Street and 4,300 pedestrians on Fifth Street with acceptable pedestrian operations. Since the proposed project would generate about 400 pedestrian trips during the weekday P.M. peak hour, it would contribute less than 10 percent to the maximum number of pedestrians per hour. As such, it is anticipated that the addition of project-generated pedestrian trips would not substantially affect sidewalk operations.

<p>Table 3 Qualitative Pedestrian Analysis for Howard and Fifth Streets Sidewalks</p>			
Location	Actual Sidewalk Width	Effective Sidewalk Width	Maximum Number of Pedestrians per Hour¹
Howard Street – north	12 feet	7 feet	6,000
Fifth Street – east	10 feet	5 feet	4,300

Note:

¹ To maintain LOS D. Assumes a peak hour factor of 0.95.

Source: *Downtown Streetscape Plan*, Wilbur Smith Associates, July 2001

BICYCLE IMPACTS

The proposed project is within easy bicycling distance of a large portion of San Francisco residents and is located near several Citywide bicycle routes. Some of the “other” trips generated by the proposed project during the weekday P.M. peak hour would be bicycle trips. The proposed project would provide 12 bicycle parking spaces (six within the hotel parking garage and six within the residential parking garage as required by the Planning Code) and showers and lockers (not required in a hotel building). With the current bicycle and traffic volumes on adjacent streets, bicycle travel generally occurs without major impedances or safety problems. The project-generated increase in vehicles in the vicinity of the project site would not be substantial enough to affect bicycle travel in the area. Because the existing wide curb lane for bicycles on Howard Street is on the southern side of the street, project-related vehicles entering and exiting the proposed porte cochere would not affect bicycle operations.

DELIVERY, TOUR BUS, AND PASSENGER LOADING IMPACTS

Delivery, tour bus, and passenger loading for the proposed project would occur within the porte cochere located at the eastern edge of the project site. The porte cochere would be oriented north-south, accessing Howard Street on the south and connecting, via an alley, with Minna Street on the north. The porte cochere would have three travel lanes (one northbound, one southbound, one mixed-flow) plus designated spaces for tour bus loading and passenger loading, and would provide access to the hotel parking garage and three loading docks located west of the porte cochere.

The *Planning Code* would require the project to provide three off-street loading spaces, two for the hotel uses, and one for the residential uses. The three proposed loading docks would fulfill this requirement. Delivery and service vehicle demand was calculated using the methodology presented in the *SF Guidelines*. The proposed project would generate approximately 53 delivery/service vehicle trips per day, mostly generated by the proposed hotel uses. This would correspond to a demand for about 2.5 loading spaces during an average hour and about 3.0 spaces during the peak hour of loading activities. The three proposed loading docks would meet the anticipated demand.

The *Planning Code* would require the project to provide one off-street tour bus loading space. Two tour bus loading spaces would be provided along the eastern edge of the porte cochere, which would meet the tour bus loading requirement. A dedicated walkway would be located adjacent to the tour bus loading space.

Within the porte cochere, there would be space for between three and seven passenger vehicles. It is anticipated that there would be a demand for between 3.5 and 11.5 spaces for peak passenger loading/unloading and the temporary storage of vehicles for valet operations, although the demand for spaces would be lower with effective valet parking operations. The project sponsor also proposes to establish a 60-foot taxi queuing zone on Howard Street, to serve the hotel and restaurant uses. This would require the elimination of three on-street metered parking spaces. (As discussed Parking Impacts, above, elimination of these three spaces would not substantially affect area-wide parking conditions.) The proposed taxi queuing zone could not be used during the weekday evening period (4:00 to 6:00 P.M.) because there is a no-parking restriction on the north curb of Howard Street during this time. The proposed taxi zone, in combination with the spaces within the porte cochere, would provide sufficient space for passenger loading/unloading and valet operations. During the evening peak period taxis would have to use the porte cochere.

Most of the delivery vehicles are anticipated to be small trucks and vans, with some large delivery trucks and tractor-trailers. The smaller delivery vehicles would be able to access the loading docks by driving past and then reversing in. Larger vehicles would need to double park within the porte cochere. According to the project sponsor, it would be possible to schedule deliveries by large vehicles to avoid times of high activity. After making deliveries, trucks would drive on the connecting alley to Minna Street and then access Fourth Street. Due to the relatively tight turning radius, it may be difficult for larger delivery vehicles to turn from the alley onto Minna Street. To improve conditions, it may be possible to remove one or two parking spaces on the south side of Minna Street (directly adjacent to the alley), which would allow trucks to make a wider turn.

If the loading dock, porte cochere, or tour bus loading space is occupied, it may be possible for vehicles to use the 60-foot long taxi queuing zone proposed for the front of the project site on Howard Street.

According to the project sponsor, trash containers would be rolled from the trash room to the loading dock on solid waste collection days. The trucks would be directed to drive into the porte cochere, load the trash containers, and then exit to Minna Street or turn around and exit to Fifth Street.

CONSTRUCTION IMPACTS

Project construction is expected to take about 25 months, with staging of most construction equipment and materials occurring within the project site and on the adjacent sidewalks on Fifth and Howard Streets. To accommodate construction staging and to provide a temporary pedestrian walkway, the parking lane along Fifth and Howard Streets would be closed throughout the construction period. The closure of the parking lane on Howard Street would result in the temporary elimination of the additional weekday P.M. peak period travel lane at this location.

It is anticipated that no regular traffic lanes would need to be closed during construction. However, if it is determined that temporary traffic lane closures would be needed, the closures would be coordinated with the City in order to minimize the impacts on local traffic. In general, lane and sidewalk closures are subject to review and approval by the Department of Public Works (DPW) and the Interdepartmental Staff Committees on Traffic and Transportation (ISCOTT). It is anticipated that no Muni bus stops would need to be relocated during construction. However, if it is determined that temporary Muni bus stop relocation would be needed, the relocations would be coordinated with Muni's Street Operations/Special Events office.

Throughout the construction period, there would be a flow of construction-related trucks into and out of the site. The impact of construction truck traffic would be a temporary lessening of the capacities of local streets due to the slower movement and larger turning radii of trucks, which may affect both traffic and Muni operations. There would be an average of 20 to 100 construction trucks per day, depending on the phase, and a maximum of 12 trucks per hour. It is anticipated that a majority of the construction-related truck traffic would use I-80/U.S. 101 or Third Street to travel to and from the project site. To access the project site from I-80/U.S. 101, trucks would use the nearby off-ramps at Fourth/Bryant and

Fifth/Harrison, and travel on Third or Fifth Street to Howard Street. To return to I-80/U.S. 101, trucks would travel on Fourth or Fifth Streets, and use the nearby on-ramps at Fifth/Bryant and Fourth/Harrison.

On average, there would be between 30 and 200 construction workers per day at the project site, depending on the phase. Trip distribution and mode split data are not available for the construction workers. It is anticipated that the addition of worker-related vehicle or transit trips would not substantially affect the transportation conditions, as any impacts on the vehicle or transit network would be similar to, or less than, those of the proposed project. Construction workers would generate a temporary parking demand. Since the nearby parking facilities currently have availability during the day, it is anticipated that construction worker parking demand could be accommodated without substantially affecting area-wide parking conditions. Construction workers would be able to park within the proposed project's parking facilities after their construction (by the tenth month).

Although the traffic and parking effects of construction would generally not be considered significant impacts as they are temporary and mitigation measures are not required, the following improvement measures would assist in minimizing construction impacts and will be recommended as conditions of approval:

- Limiting truck movements to the hours between 9:00 a.m. to 3:30 p.m. (or other times, if approved by the Department of Parking and Traffic (DPT)), would minimize disruption of the general traffic flow on adjacent streets during the A.M. and P.M. peak periods.
- To improve operating conditions, the project sponsor and construction contractor(s) would meet with the traffic Engineering Division of the Department of Parking and Traffic, the Fire Department, Muni, and the Planning Department to determine feasible measures to reduce traffic congestion, including disruption and pedestrian circulation conditions.
- To accommodate the temporary parking demand of construction workers, the project sponsor could make arrangements at parking facilities in the area.
- Coordination of project construction activities with those of the adjacent Moscone West expansion and Emporium Site Hotel project would minimize the impacts of combined construction traffic.

2015 Cumulative Conditions

Under year 2015 cumulative conditions, nine of the eleven study intersections would operate at LOS E or F during the weekday P.M. peak hour, while the intersections of Market/Fourth and Howard/Sixth would operate at LOS D, as shown in Table 4, page 88. These poor conditions would be the direct result of the anticipated general growth in traffic volumes in the area. The increase in traffic volumes towards the regional freeway network, particularly southbound on Fourth, Fifth, and Sixth Streets, would result in substantial delays along these roadways and a potential increase in queuing at the freeway on-ramps. Overall, the proposed project would contribute between 0.2 and 2.3 percent of the total 2015 cumulative traffic volumes during the weekday P.M. peak hour, as shown in Table 5, page 88. The proposed project would contribute between 1.4 percent and 14.7 percent of the growth in cumulative volumes over existing conditions. The proposed project would contribute more than five percent of the growth in cumulative volumes at three intersections: Howard/Fourth (6.1 percent), Howard/Fifth (14.7 percent), and Harrison/Fifth (5.5 percent). The proposed project's contribution to the cumulative traffic growth at the intersections of Howard/Fifth and Harrison/Fifth Streets would be considered a significant cumulative impact. Since most of the proposed project's contribution to the intersection at Mission/Fourth Streets would be in the non-critical direction, the effect to this intersection would not be considered significant.

Between existing and 2015 cumulative conditions, the demand for Muni ridership is projected to increase by over 11,000 passengers at the four screenlines during the weekday P.M. peak hour (including project-generated trips), while Muni capacity is projected to increase by about 4,800 passengers. It is anticipated that Muni would operate at approximately 105 percent of capacity during the weekday P.M. peak hour, and ridership is expected to approach or exceed capacity on most screenlines and sub-corridors. The approximately 100 project-generated trips that would cross the Muni screenlines would have a minimal contribution to cumulative transit ridership, and alone would not substantially affect the peak hour capacity utilization of each screenline. The demand for regional transit service is also anticipated to increase substantially. Projected ridership at the East Bay screenline is expected to exceed capacity, while the North Bay and South Bay screenlines would operate at less than 100 percent of capacity. The proposed project would have a minimal contribution to the cumulative regional transit ridership, and alone would not substantially affect the peak hour capacity utilization of each screenline.

Table 4
Intersection Levels of Service
Existing and 2015 Cumulative Conditions

Intersection	Existing			Cumulative 2015		
	Delay	LOS	v/c	Delay	LOS	v/c
Market/Fifth	26.0	D	--	55.8	E	1.02
Market/Fourth	18.0	C	-	38.2	D	-
Mission/Fifth	23.7	C	--	>60	F	1.00
Mission/Fourth	20.0	C	--	47.8	E	0.90
Howard/Sixth	18.2	C	--	38.2	D	-
Howard/Fifth	33.8	D	--	>60	F	1.19
Howard/Fourth	38.1	D	--	>60	F	1.12
Folsom/Fourth	44.4	E	0.99	>60	F	1.14
Harrison/Fifth/I-80	29.4	D	--	>60	F	1.09
Harrison/Fourth/I-80	>60	F	1.16	>60	F	1.33
Brannan/Sixth/I-280	44.9	E	0.94	>60	F	1.08

Notes:

Delay presented in seconds per vehicle.

v/c = volume-to-capacity ratio (presented for intersections operating at LOS E or F)

Source: Wilbur Smith Associates, February 2001

Table 5
Proposed Project's Contribution to Traffic Volumes

Intersection	Existing Volume	Project Volume	2015 Cumulative Volume	Contribution to Total 2015 Cumulative Volume	Contribution to Growth in Volumes
Market/Fifth	2,260	5	2,629	0.2%	1.4%
Market/Fourth	2,001	7	2,329	0.3%	2.1%
Mission/Fifth	3,167	18	3,693	0.5%	3.4%
Mission/Fourth	2,779	20	3,246	0.6%	4.3%
Howard/Sixth	3,840	31	4,489	0.7%	4.8%
Howard/Fifth	3,144	87	3,737	2.3%	14.7%
Howard/Fourth	3,424	36	4,102	0.9%	6.1%
Folsom/Fourth	3,308	24	3,865	0.6%	4.3%
Harrison/Fifth/I-80	3,318	31	3,884	0.8%	5.5%
Harrison/Fourth/I-80	4,102	17	4,779	0.4%	2.5%
Brannan/Sixth/I-280	6,158	19	7,168	0.3%	1.9%

Source: Wilbur Smith Associates, February 2001

NOTES - Transportation

¹ Wilbur Smith Associates, *888 Howard Street Transportation Study, Case No. 2000.790E*, August 1, 2001. This report is available for review in file No. 2000.790 at the Planning Department, 1660 Mission Street, fifth floor.

E. AIR QUALITY

Setting

The Bay Area Air Quality Management District (BAAQMD) operates a regional monitoring network that measures the ambient concentrations of six air pollutants (the “criteria pollutants”): ozone (O₃), carbon monoxide (CO), fine particulate matter (PM₁₀), lead (Pb), nitrogen dioxide (NO₂) and sulfur dioxide (SO₂).

The federal Clean Air Act and the California Clean Air Act of 1988 require that the State Air Resources Board, based on air quality monitoring data, designate portions of the state where the federal or state ambient air quality standards are not met as “non-attainment areas.” Because of the differences between the national and state standards, the designation of nonattainment areas is different under the federal and state legislation. On the basis of the monitoring data, the Bay Area had been designated a “non-attainment” area with respect to the Federal O₃ and CO standards. The air basin is an attainment area or is unclassified for all other national ambient air quality standards.

Under the California Clean Air Act, the entire San Francisco Bay Air Basin is a nonattainment area for ozone and PM₁₀. The air basin is either in attainment or unclassified for other pollutants under state standards. In addition, San Francisco has experienced violations of the state PM₁₀ standards.

A four-year (1997 to 2000) summary of data collected at the BAAQMD monitoring station at 10 Arkansas Street (a little more than a mile south of the project site) indicated that there were no violations of either the one-hour or eight-hour CO standards, or the standards for ozone, nitrogen dioxide, sulfur dioxide or

lead. The state PM_{10} standard was exceeded on 0 to 6 days each year during the four-year period of 1997-2000 (see Appendix D).

Data from air quality monitoring in San Francisco show that there have been violations of the state (but not federal) fine particulate standards. CO is a non-reactive air pollutant, the major source of which is motor vehicles. CO concentrations are generally highest during periods of peak traffic congestion. Particulate levels are relatively low near the coast and increase with distance from the coast, peaking in dry, sheltered valleys. The primary sources of particulates in San Francisco are construction and demolition, combustion of fuels for heating, and vehicle travel over paved roads.¹

San Francisco, like all other sub-regions in the Bay Area, contributes to regional air quality problems, primarily O_3 , in other parts of the Bay Area. Ozone is not emitted directly from air pollutant sources, but is produced in the atmosphere over time and distance through a complex series of photochemical reactions involving hydrocarbons (HC) and nitrogen oxides (NO_x), which are carried downwind as the photochemical reactions occur. Ozone standards are violated most often in the Santa Clara, Livermore and Diablo Valleys, because local topography and meteorological conditions favor the build-up of ozone precursors there.

In 1999, emissions from motor vehicles were the source of 70 percent of the CO, 41 percent of the HCs, 72 percent of the PM_{10} , 89 percent of the sulfur oxides and 53 percent of the NO_x emitted in San Francisco.²

The Bay Area has both a federal and state air quality plan. Both plans propose the imposition of controls on stationary sources (factories, power plants, industrial sources, etc.) and Transportation Control Measures designed to reduce emissions from automobiles.

Significance Criteria

A project would have a significant effect on the environment with respect to air quality if it would violate any ambient air quality standard or contribute substantially to an existing or projected air quality violation, or expose sensitive receptors to substantial pollutant concentrations. The BAAQMD specifies the

significance criteria as follows:³ (1) the project impacts would be considered significant if they cause operation-related emissions equal to or exceeding an established threshold of 80 pounds per day of ROG, NO_x, or PM₁₀, or cause CO concentrations above the state ambient air quality standard, (2) the project impacts would also be considered to have a significant contribution to cumulative regional air quality effects if the project impacts exceed these standards. If project air quality impacts would not exceed the BAAQMD thresholds, the project still may be found to contribute to significant cumulative air quality impacts if the project is inconsistent with the local general plan's air quality element.⁴

Impacts

Air quality impacts from land development projects result from project construction and operation. Construction emissions, primarily dust generated by earthmoving activities and criteria air pollutants emitted by construction vehicles, would have a short-term effect on air quality. Operational emissions, generated by project-related traffic and by combustion of natural gas for building space and water heating, would continue to affect air quality throughout the lifetime of the project.

OPERATIONS EMISSIONS

Project operation would affect local air quality by increasing the number of vehicles on project-impacted roads and at the project site, and by introducing stationary emissions to the project site. Transportation sources, such as project-generated vehicles, would account for over 90 percent of operational project-related emissions. Stationary source emissions, generated by combustion of natural gas for building space and water heating, would be less-than-significant.

REGIONAL IMPACTS

Project traffic would also have an effect on air quality outside the project vicinity. Trips to and from the project would result in air pollutant emissions over the entire Bay Area. To evaluate emissions associated with the project, the URBEMIS-7G computer program was employed. The daily increases in regional emissions from auto travel are shown in Table 6 on page 92 for reactive hydrocarbons and oxides of

nitrogen (two precursors of ozone), and PM₁₀ (particulate matter, 10 micron). Emissions are below the applicable thresholds, so project impacts on regional emissions would be less than significant.

Table 6 Project Regional Emissions in Pounds Per Day*			
	Reactive Hydrocarbons	Nitrogen Oxides	PM ₁₀
Project Daily Emission	31.6	33.9	11.4
BAAQMD Threshold	80.0	80.0	80.0

- * Estimates of regional emissions generated by project traffic were made using a program called URBEMIS-7G. Inputs to the URBEMIS-7G program include trip generation rates, vehicle mix, average trip length by trip type and average speed. Trip generation rates for project land uses were provided by the project transportation consultant. Average trip lengths and vehicle mixes for the Bay Area were used. Average speed for all types of trips was assumed to be 25 MPH. The analysis assumed a year 2001 vehicle mix. The URBEMIS-7G runs assumed summertime conditions for ROG, NO_x and PM₁₀.

Source: Don Ballanti, Certified Consulting Meteorologist.

The Bay Area Air Quality Management District has identified three criteria that would require the estimation of local carbon monoxide concentrations:

- Project vehicle emissions would exceed 550 pounds per day
- Project traffic would impact intersections or roadway links operating at Level of Service (LOS) D, E or F or would cause LOS to decline to D, E or F
- Project traffic would increase traffic volumes on nearby roadways by 10 percent or more.

A computer program, the URBEMIS-7G, developed by the California Air Resources Board, was applied to project daily trip generation under winter conditions to estimate total project-related carbon monoxide emissions. The resulting calculated emission of 265 pounds/day of carbon monoxide from project-generated vehicles would not exceed the BAAQMD threshold of significance of 550 pounds/day. Because project traffic would contribute to the traffic delays at intersections currently operating at LOS D, E or F,

carbon monoxide concentrations at eight intersections, all operating at LOS D or worse, were estimated using a computer model developed by the California Department of Transportation, CALINE-4

Table 7 below shows predicted 1-hour and 8-hour averaged carbon monoxide concentrations at the eight intersections that meet the BAAQMD criteria for modeling. For these intersections the estimated carbon monoxide concentrations with project-generated traffic would be below the applicable state/federal standards (20 parts per million [ppm] for the 1-hour standard and 9 ppm for the 8-hour standard), and hence, a less-than-significant impact.

Table 7 Existing and Projected Curbside Carbon Monoxide Concentrations at Selected Intersections*				
Intersection	Without Project (2001)		With Project (2001)	
	1-Hour	8-Hour	1-Hour	8-Hour
Market Street/Fifth Street	7.7	5.2	7.7	5.2
Mission Street/Fifth Street	8.1	5.5	8.1	5.5
Howard Street/Fifth Street	8.0	5.4	8.1	5.5
Howard Street/Fourth Street	8.3	5.6	8.3	5.6
Folsom Street/Fourth Street	8.0	5.4	8.0	5.4
Harrison Street /Fourth Street	8.6	5.9	8.6	5.9
Harrison Street/Fifth Street	7.8	5.3	7.8	5.3
Brannan Street/Sixth Street	11.0	7.5	11.0	7.5
Most Stringent Standard	20.0	9.0	20.0	9.0

- * Calculations were made using a screening procedure contained in the *BAAQMD CEQA Guidelines*. Background concentrations of 6.4 ppm (1-hour) and 4.3 ppm (8-hour) were calculated using 1992 isopleths of carbon monoxide concentration and rollback factors developed by the Bay Area Air Quality Management District. The one-hour State standard is 20 ppm, the one-hour federal standard is 35 ppm, and the eight-hour State and federal standards are 9 ppm. Emission factors were derived from the California Air Resources Board EMFAC7G computer model (Version 1.0c).

Source: Don Ballanti, Certified Consulting Meteorologist

NOTES — Air Quality

¹ Bay Area Air Quality Management District, *BAAQMD CEQA Guidelines, Assessing the Air Quality Impacts of Projects and Plans*, April 1996 (revised December 1999).

² Ibid.

³ Ibid., Section 2.3.

⁴ Ibid., page 18.

F. GROWTH INDUCEMENT

In general, a project would be considered growth-inducing if its implementation would result in substantial population increases and/or new development that might not occur if the project were not approved and implemented. The proposed project would replace an existing surface parking lot with a mixed use building containing hotel, residential, and retail uses. This would intensify the use of the site, but would not be expected to substantially alter development patterns in the South of Market area or elsewhere in San Francisco. The project site is in an urbanized area that is intensively developed and that already supports substantial amounts of hotel, residential, cultural, and commercial development in surrounding blocks.

The addition of 67 residential units, 1,000 square feet of retail space, and 500 hotel rooms would increase the daily population on the project site by approximately 1,271 people. This daily population would consist of approximately 503 employees, 676 guests, and 92 residents. It is anticipated that some of the new residents would relocate from elsewhere in the City and would not represent new residents to the City, while other residents would come from outside San Francisco. Similarly, some of the 503 project employees would already reside in San Francisco, while some employees from outside the City may seek housing within the City boundaries.

The number of on-site residents and employees relocating from outside San Francisco would be small in proportion to San Francisco's population, and would not represent a substantial growth in population or concentration in the neighborhood, City, or region.

The proposed project is located in an urban area and would not necessitate or induce the extension of municipal infrastructure. In view of the above, there is no evidence to suggest that the project would result in additional development in the project site vicinity that would not otherwise occur.

IV. MITIGATION MEASURES PROPOSED TO MINIMIZE THE POTENTIAL ADVERSE IMPACTS OF THE PROJECT

Preliminary review during the preparation of the Initial Study for the proposed project identified a number of potential impacts that could be minimized or eliminated through implementation of one or more mitigation measures. To facilitate project approval and minimize potential impacts, the project sponsor has incorporated those previously identified mitigation measures into the project; they would be implemented during the course of project construction or operation, as appropriate. In addition, in the course of environmental review conducted during preparation of this EIR, further measures were identified to reduce or eliminate identified impacts of the proposed project. Each of the mitigation measures, both those identified in the Initial Study and subsequently incorporated into the project and those recommended by this EIR, are listed below.

Existing City, State, and federal regulations require a variety of protective and other measures that would also serve to mitigate potential project impacts. These measures are not identified in this chapter; rather, they are assumed to constitute part of the project, and compliance with the measures would be monitored by the appropriate regulatory agency. City-mandated controls on the project would include a limitation on construction noise (San Francisco Noise Ordinance, Article 29 of the San Francisco Police Code, 1972); a prohibition on the use of mirrored glass on the building (City Planning Commission Resolution No. 9212); protective measures against lead-based paint exposure (Chapter 36 of the San Francisco Building Code, Work Practices for Exterior Lead-Based Paint) and the requirement for street trees (Planning Code, Section 143). The project sponsor and construction contractors would also be required to observe all State and federal OSHA safety requirements related to handling and disposal of other hazardous materials, such as asbestos.

The mitigation measures identified in the Initial Study and this EIR follow. Those measures with an asterisk (*) are from the Initial Study (see Appendix A) and are proposed to be included as a part of the project.

MEASURES THAT COULD BE IMPLEMENTED BY PUBLIC AGENCIES

A. Transportation

The project sponsor has agreed to make a \$50,000 contribution to the Department of Parking and Traffic's Integrated Transportation Management System (ITMS) program. The new San Francisco ITMS program is a City-wide real-time electronic transportation management system that will install various Intelligent Transportation System (ITS) infrastructure components to improve traffic circulation within the City. The South of Market area would be the first phase of the system that would be implemented. This program will monitor and manage traffic by receiving real-time information at the Traffic Management Center via closed circuit TV cameras.

The implementation of the ITMS program will improve overall traffic conditions and reduce traffic congestion in the City. Although the implementation of ITMS may not directly mitigate the significant impacts of the proposed project under cumulative conditions, this program would result in overall traffic improvements and lessening of congestion, and would facilitate circulation in the South of Market area, where the proposed project is located.

MEASURES PROPOSED AS PART OF THE PROJECT

B. Construction Air Quality *

The project sponsor shall require the construction contractor(s) to spray the project site with water during excavation, grading, and site preparation activities; spray unpaved construction areas with water at least twice per day; cover stockpiles of soil, sand, and other such material, cover trucks hauling debris, soils, sand or other such material; and sweep surrounding streets during these periods at least once per day to reduce particulate emissions. Ordinance 175-91, passed by the Board of Supervisors on May 6, 1991, requires that non-potable water be used for dust control activities. Therefore, the project sponsor shall require the construction contractor(s) to obtain reclaimed water from the Clean Water Program for this purpose.

The project sponsor shall require the project contractor(s) to maintain and operate construction equipment so as to minimize exhaust emissions of particulates and other pollutants, by such means as prohibiting idling motors when equipment is not in use or when trucks are waiting in queues, and implementing specific maintenance programs to reduce emissions for equipment that would be in frequent use for much of the construction period.

C. Hazards

1. UNDERGROUND STORAGE TANKS *

The project sponsor shall conduct an Underground Storage Tank (UST) scan by magnetometer to determine if abandoned USTs or piping exist on the site. If any are found, they shall be removed in accordance with regulatory requirements, and surrounding soils shall be tested. Any soil found to be contaminated at or above potentially hazardous levels shall be handled and disposed in accordance with Mitigation Measure C2, below.

2. CONTAMINATED SOIL *

Step 1: Preparation of Site Mitigation Plan

If, based on the results of the soil tests conducted, the San Francisco Department of Public Health (DPH) determines that the soils on the project site are contaminated with lead or other contaminants at or above potentially hazardous levels, the DPH shall determine if preparation of a Site Mitigation Plan (SMP) is warranted. If such a plan is requested by the DPH, the SMP shall include a discussion of the level of contamination of soils on the project site and mitigation measures for managing contaminated soils on the site, including, but not limited to: 1) the alternatives for managing contaminated soils on the site (e.g., encapsulation, partial or complete removal, treatment, recycling for reuse, or a combination); 2) the preferred alternative for managing contaminated soils on the site and a brief justification; and 3) the specific practices to be used to handle, haul, and dispose of contaminated soils on the site. The SMP shall be submitted to the DPH for review and approval. A copy of the SMP shall be submitted to the Planning Department to become part of the case file.

Step 2: Handling, Hauling, and Disposal of Contaminated Soils

(a) specific work practices: If based on the results of the soil tests conducted, DPH determines that the soils on the project site are contaminated with lead or other contaminants at or above potentially hazardous levels, the construction contractor shall be alert for the presence of such soils during excavation and other construction activities on the site (detected through soil odor, color, and texture and results of on-site soil testing), and shall be prepared to handle, profile (i.e., characterize), and dispose of such soils appropriately (i.e., as dictated by local, state, and federal regulations, including OSHA lead-safe work practices) when such soils are encountered on the site.

(b) dust suppression: Soils exposed during excavation for site preparation and project construction activities shall be kept moist throughout the time they are exposed, both during and after work hours.

(c) surface water runoff control: Where soils are stockpiled, visqueen shall be used to create an impermeable liner, both beneath and on top of the soils, with a berm to contain any potential surface water runoff from the soil stockpiles during inclement weather.

(d) soils replacement: If necessary, clean fill or other suitable material(s) shall be used to bring portions of the project site, where contaminated soils have been excavated and removed, up to construction grade.

(e) hauling and disposal: Contaminated soils shall be hauled off the project site by waste hauling trucks appropriately certified with the State of California and adequately covered to prevent dispersion of the soils during transit, and shall be disposed of at a permitted hazardous waste disposal facility registered with the State of California.

Step 3: Preparation of Closure/Certification Report

After excavation and foundation construction activities are completed, the project sponsor shall prepare and submit a closure/certification report to DPH for review and approval. The closure/certification report shall include the mitigation measures in the SMP for handling and removing contaminated soils from the project site, whether the construction contractor modified any of these mitigation measures, and how and why the construction contractor modified those mitigation measures.

D. Cultural Resources *

The project sponsor shall retain the services of an archaeologist. During removal of structures, paving, and any buried foundation materials found on the site, the archaeologist shall carry out a pre-excavation testing program to better determine the probability of finding archaeological remains on the site. The testing program shall consist of a series of mechanical, exploratory borings or trenches and/or other testing methods determined to be appropriate by the archaeologist.

If, after testing, the archaeologist determines that no further investigations or precautions are necessary to safeguard potentially significant archaeological resources, the archaeologist shall submit a written report to the Environmental Review Officer (ERO), with a copy to the project sponsor. If the archaeologist determines that further investigations or precautions are necessary, he/she shall consult with the ERO, and they shall jointly determine what additional procedures are necessary to minimize potential effects on archaeological resources.

These additional mitigation measures shall be implemented by the project sponsor and might include a program of on-site monitoring of all pile driving and any site excavation that may be necessary, during which the archaeologist shall record observations in a permanent log. Whether or not there are archaeological finds of significance, the archaeologist shall prepare a written report on the monitoring program that shall be submitted first and directly to the ERO, with a copy to the project sponsor. During the monitoring program, the project sponsor shall designate one individual on site as her/his representative. This representative shall have the authority to suspend work at the site to give the archaeologist time to investigate and evaluate archaeological resources should they be encountered.

IV. MITIGATION MEASURES

Should evidence of cultural resources of potential significance be found during the monitoring program, the archaeologist shall immediately notify the ERO, and the project sponsor shall halt any activities which the archaeologist and the ERO jointly determine could damage such cultural resources. Ground disturbing activities which might damage cultural resources would be suspended for a total maximum of four weeks over the course of construction.

After notifying the ERO, the archaeologist shall prepare a written report to be submitted first and directly to the ERO, with a copy to the project sponsor, which shall contain an assessment of the potential significance of the archaeological finds and recommendations for what measures should be implemented to minimize potential effects on archaeological resources. Based on this report, the ERO shall recommend specific additional mitigation measures to be implemented by the project sponsor. These additional mitigation measures might include a site security program, additional on-site investigations by the archaeologist, and/or documentation, preservation, and recovery of archival material.

Finally, the archaeologist shall prepare a report documenting the archaeological resources that were discovered, an evaluation as to their significance, and a description as to how any archaeological testing, exploration, and/or recovery program was conducted.

Copies of all draft reports prepared according to this mitigation measure shall be sent first and directly to the ERO for review. Following approval by the ERO, copies of the final report shall be sent to the President of the Landmarks Preservation Advisory Board and the California Archaeological Site Survey, Northwest Information Center. Three copies of the final report shall be submitted to the Office of Major Environmental Analysis, accompanied by copies of the transmittals documenting distribution to the President of the Landmarks Preservation Advisory Board and the California Archaeological Site Survey, Northwest Information Center.

V. SIGNIFICANT ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED IF THE PROJECT IS IMPLEMENTED

In accordance with Section 21100(b)(2)(A) of the California Environmental Quality Act (CEQA), and with Section 15126.2 of the State CEQA Guidelines, the purpose of this chapter is to identify environmental impacts that could not be eliminated or reduced to an insignificant level by mitigation measures included as part of the proposed project, or by other mitigation measures that could be implemented, as described in Chapter IV, Mitigation Measures, pages 96 through 100. This chapter is subject to final determination by the City Planning Commission as part of their certification of the EIR. The Final EIR will be revised, if necessary, to reflect the findings of the Commission.

The proposed project, with mitigation, would have the following unavoidable significant cumulative impact in the area of traffic:

- The proposed project would make a considerable contribution to growth in cumulative traffic volumes at two intersections: Howard/Fifth (14.7 percent), and Harrison/Fifth (5.5 percent)

With implementation of the mitigation measures outlined in Chapter IV, Mitigation Measures, of this report, all other potential significant impacts would be reduced to a less-than-significant level. The project sponsor has agreed to implement all measures in Chapter IV (except for those requiring public agency responsibility) in an agreement dated August 3, 2001.¹

¹ This mitigation agreement form is available for public review at the San Francisco Planning Department, 1600 Mission Street, fifth floor, in Case File No. 2000 790E.

VI. ALTERNATIVES TO THE PROPOSED PROJECT

This chapter identifies alternatives to the proposed project and discusses environmental impacts associated with each alternative. Project decision-makers could adopt any of the following alternatives instead of the proposed project, if an alternative would reduce or eliminate significant environmental impacts of the proposed project and is determined to be feasible and would attain most of the basic objectives of the project. This determination of feasibility will be made by project decision-makers on the basis of substantial evidence in the record which shall include, but not be limited to, information presented in this EIR and in comments received on the Draft EIR.

Alternatives were selected that would reduce identified impacts of the proposed project. The following alternatives are evaluated: a No-Project Alternative, a Code-Compliant Alternative, and a Hotel-Only Alternative. The Code Compliant Alternative would consist of a smaller building, occupied by a hotel, that would comply with existing zoning, height, bulk, and FAR restrictions, including the 160-foot height limit. The Hotel-Only Alternative would consist of a building the same size as the proposed project occupied solely by hotel uses, with no residential uses. Other alternatives, with a variety of building configurations, could also be considered by decision-makers as these other alternatives would be “bracketed” by the range of alternatives described herein.

Whether property is owned or can reasonably be acquired by the project sponsor has a strong bearing on the feasibility of developing a project alternative at a different site. No viable alternative sites have been identified within San Francisco where the proposed project could be constructed and meet the project sponsor’s objectives. A similar-sized project within the downtown area would have similar cumulative effects.

ALTERNATIVE A: NO PROJECT

Description

This alternative would entail no change to the existing parking uses on the site. The proposed project would not be built. However, this alternative would not preclude future proposals for redevelopment of the project site.

Impacts

If the No-Project Alternative were implemented, none of the impacts associated with the proposed project would occur. The effects of the proposed 39-story project on visual quality and urban design would not occur, nor would there be the wind, shadow and air quality impacts of the proposed project. There would be no project-specific transportation effects, including the contribution to the cumulative growth of traffic at the intersections of Howard/Fourth, Mission/Fourth, and Howard/Fifth, which would be a significant impact of the proposed project. Other less-than-significant effects described in the Initial Study, including generation of noise during construction, potential discovery of subsurface cultural resources during excavation, and potentially hazardous materials, among other impacts, would not occur with this alternative.

The No Project Alternative would not meet the project sponsor's objectives of developing market rate condominiums and a first class hotel with meeting room space, accessible to the retail and commercial center of the City and able to serve the Yerba Buena Area and the Moscone Convention Center.

If this alternative is selected by the San Francisco Planning Commission and a different proposal is submitted at a later date for development of all or part of the project site, that proposal would be subject to a separate project-specific environmental review under the requirements of CEQA.

ALTERNATIVE B: CODE-COMPLIANT ALTERNATIVE

Description

Alternative B would entail either a mixed-use (Alternative B-1) or a hotel-only (Alternative B-2) project that complies with existing zoning, height, bulk, and Floor Area Ratio (FAR) restrictions. These alternatives would be 160 feet and 16 stories high, in compliance with the existing height restriction, and would involve a lower of intensity of uses than the proposed project, as shown in Figures 28 through 32, pages 105 through 109. For Alternative B-1, the upper 14 stories would contain approximately 225 hotel rooms. The first two floors would contain a restaurant, approximately 1,000 square feet of retail space (the same as the proposed project), and approximately 15,000 square feet of meeting space (compared to approximately 40,200 square feet in the proposed project). The space devoted to other hotel amenities such as the health club and spa would also be less than in the proposed project. There would be no residential uses in this alternative. A variant of this alternative (Alternative B-2) would omit the restaurant and retail uses and would use the ground floor space for lobby.

Impacts

Compared to the proposed project, Alternatives B-1 and B-2: Code-Compliant Alternatives, because of their smaller size would have less intensive environmental effects on visual quality and urban design, transportation and parking, population, shadows, construction noise, air quality, utilities and public services, and energy/natural resources. In those environmental areas not governed by height or bulk, this alternative would have similar effects on land use, operation noise, biology, geology/topography, water, hazards, and cultural resources.

In the Code-Compliant Alternative B-1, the building would have a similar design and visual character as the proposed project, but would be substantially lower as shown in the photomontages. The visual impacts of this alternative, during both day- and nighttime, would be correspondingly reduced.

The Code-Compliant Alternative B-1 would result in fewer vehicle and transit trips than the proposed project. The impacts of both the proposed project and this alternative on intersection levels of service,



Site Photo

Source: Square One Productions



Photomontage

ALTERNATIVE B, VIEW LOOKING NORTH ON FIFTH STREET AT FOLSOM FIGURE 28



Site Photo

Source: Square One Productions



Photomontage

ALTERNATIVE B, VIEW LOOKING SOUTH ON FIFTH STREET AT MARKET **FIGURE 29**

Site Photo



Photomontage



Source: Square One Productions

ALTERNATIVE B, VIEW LOOKING WEST ON HOWARD STREET FIGURE 30

Site Photo



Photomontage



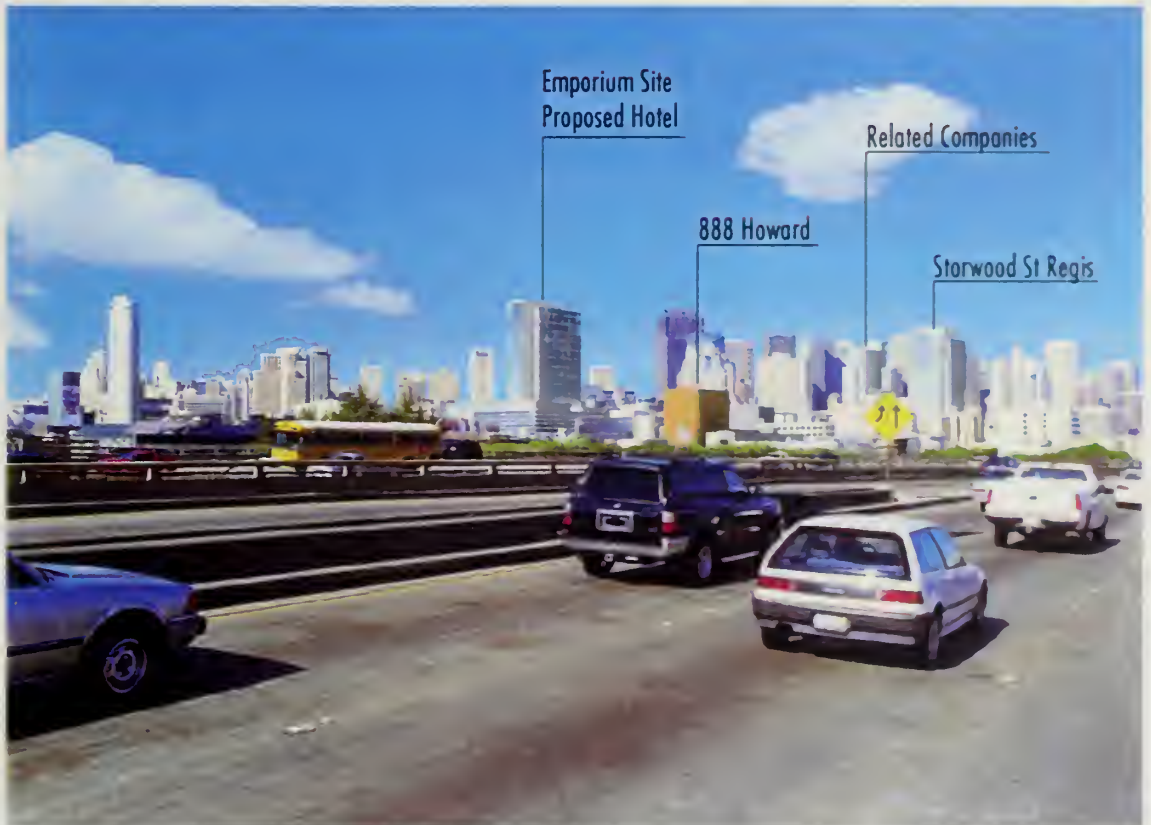
Source: Square One Productions

ALTERNATIVE B, VIEW LOOKING NORTH ON HIGHWAY 280 **FIGURE 31**

Site Photo



Photomontage



Source: Square One Productions

ALTERNATIVE B, VIEW LOOKING NORTH ON HIGHWAY 80 FIGURE 32

transit, parking, pedestrians, bicycles, construction traffic, and contribution to total cumulative traffic volumes would be less than significant. This alternative would make a smaller contribution to the growth in cumulative traffic impacts at nearby intersections than would the proposed project. The Code-Compliant Alternative would contribute less-than-considerable growth in cumulative volumes at all study intersections except Howard/Fifth, where this alternative would contribute approximately seven percent of the growth in cumulative volume, which would be a significant impact. In comparison, the proposed project would contribute more than considerable growth in cumulative volumes at three intersections, including Howard/Fifth.

This alternative would be less than half the height of the proposed project and shadow impacts on nearby streets and sidewalks would therefore be reduced. Unlike the proposed project, this alternative would cast little or no shadow on the Yerba Buena Gardens on winter afternoons. Neither this alternative nor the project would shade any open space under the jurisdiction of the Recreation and Park Department.

Alternative B-1 would generate a smaller increase in employment and daily population than the proposed project. The population effects of both this alternative and the proposed project would be less than significant.

Alternative B-1 would consist of a smaller building, and could have somewhat less impacts than the proposed project on construction noise, air quality, utilities and public services, and energy/natural resources, although these impacts would be less than significant for both the proposed project and this Alternative. This alternative would have similar effects on land use, operation noise, biology, geology/topography, water, hazards, and cultural resources as the proposed project.

Alternative B-1 would partially satisfy the project sponsor's objectives by providing a hotel that would be smaller than the proposed project, but would not provide any housing units.

The Code-Compliant Alternative B-2 would not provide restaurant and retail uses would have similar impacts as the proposed project with the exception of trip generation. The cumulative transportation impacts of the Alternative B-2 variant would have less than five percent of the growth in cumulative

volumes at the intersection of Fifth and Howard Streets. There would be no potentially significant impacts, and this Alternative B-2 variant would be environmentally superior.

VII. EIR AUTHORS

EIR AUTHORS

Planning Department, City and County of San Francisco
Major Environmental Analysis
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San Francisco, CA 94103

Environmental Review Officer: Paul E Maltzer

EIR Coordinator: Joan A. Kugler, AICP

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Adam Nobel

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Jack Fleck
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Department of Public Works, Moscone Center Expansion
Joyce H. Oishi

San Francisco Convention and Visitors Bureau

Dale Hess, Executive Vice President

Hotel and Restaurant Employees Union Local 12

Faith Raider, Research Analyst

VIII. APPENDICES

Appendix A: Initial Study

Appendix B: Wind Tunnel Study

Appendix C: Intersection Level of Service Designations

Appendix D: San Francisco Air Pollutant Summary

Appendix E: Distribution List

Appendix A

Initial Study

**NOTICE THAT AN
ENVIRONMENTAL IMPACT REPORT
IS DETERMINED TO BE REQUIRED**

Date of this Notice: January 20, 2001

Lead Agency: Planning Department, City and County of San Francisco
1660 Mission Street - 6th Floor, San Francisco, CA 94103-2414

Agency Contact Person: Joan A. Kugler, AICP

Telephone: (415) 558-5983

Project Title: 2000.790E -- 888 Howard Street, Hotel and Residential Project

Project Sponsor: 888 Howard Street Associates, LLC

Project Contact Person: John Buss

Telephone: (415) 782-5203

Project Address: 888 Howard Street/155 Fifth Street

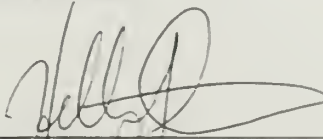
Assessor's Block(s) and Lot(s): Block 3724, Lot 66

City and County: San Francisco

Project Description: The project would be the construction of a 39-story, approximately 561,000-square-foot hotel and residential building with below-grade parking on the northeast corner of Fifth and Howard Streets (Assessor's Block 3724, Lot 66). The 37,860-square-foot existing site contains a surface parking lot with landscaping used by the adjacent Wells Fargo Data Center. The project would contain about 500 rooms, about 40,200 square feet of meeting space, an approximately 4,000-square-foot restaurant, and about 1,000 square feet of retail space. There would be a two-level below-grade parking garage that would accommodate approximately 62 independently accessible parking spaces or 100 valet parked spaces for the hotel and about 79 parking spaces for the residents. The hotel parking garage would have ingress and egress via a porte cochere on Howard Street. Above the hotel would be ten floor of approximately 60 to 70 residential condominiums. Residents would have a separate lobby on Fifth Street and secure parking on the second level of the below grade parking garage which would have access on Fifth Street. Guests would enter the hotel via the porte cochere on Howard Street. There would be two loading docks with access from Howard Street. The project site is within the C-3-S (Downtown Commercial Support) District and the 160-F Height and Bulk District. The project would require a Conditional Use Authorization by the Planning Commission for hotel use, and a zoning reclassification from the Planning Commission and the Board of Supervisors for height, and floor area ratio.

THIS PROJECT MAY HAVE A SIGNIFICANT EFFECT ON THE ENVIRONMENT AND AN ENVIRONMENTAL IMPACT REPORT IS REQUIRED. This determination is based upon the criteria of the Guidelines of the State Secretary for Resources, Section 15063 (Initial Study), 15064 (Determining Significant Effect), and 15065 (Mandatory Findings of Significance), and the following reasons, as documented in the Environmental Evaluation (Initial Study) for the project, which is attached.

Deadline for Filing of an Appeal to the Planning Commission of this Determination that an EIR is required: February 19, 2001. An appeal requires: 1) a letter specifying the grounds for the appeal, and; 2) a \$209.00 filing fee. The public is invited to comment on the scope of the EIR. Such comments must be received by February 19, 2001 to ensure consideration in preparing the Draft EIR.



Hillary Gitelman
Environmental Review Officer

INITIAL STUDY**2000.790E: 888 Howard Street Mixed Use Project****I. PROJECT DESCRIPTION AND SETTING****A. PROJECT DESCRIPTION**

The project would be the construction of a 39-story building, about 398 feet tall, with an approximate 561,000-square-foot hotel and residential building with two levels of below-grade parking on the northeast corner of Fifth and Howard Streets (Assessor's Block 3724, Lot 66) (Figure 1 Project Location, page 2).¹ The 37,860-square-foot site currently contains a surface parking lot with landscaping used by the employees of the adjacent Wells Fargo Data Center.

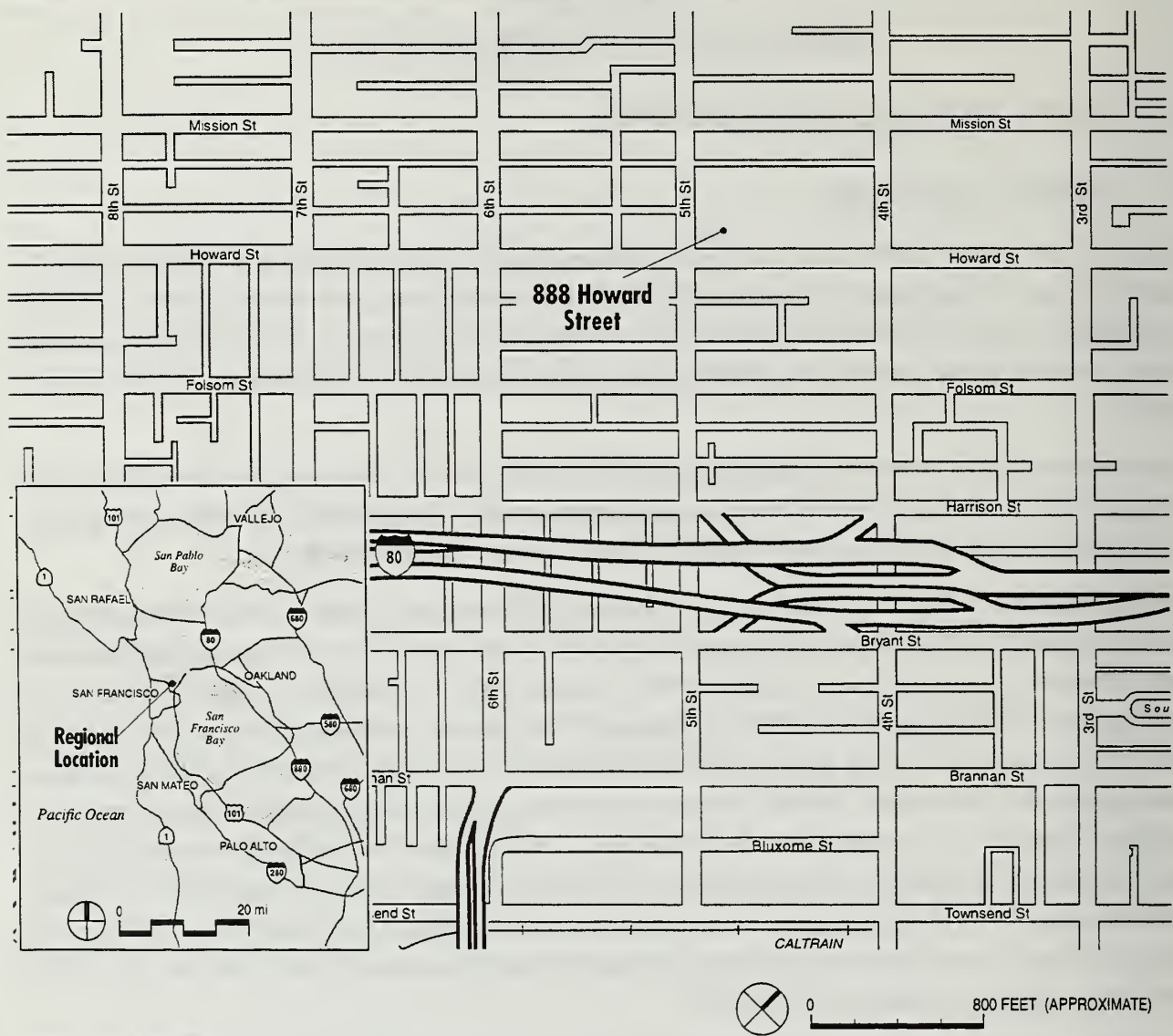
The project calls for the excavation of approximately 39,275 cubic yards of soil to a depth of about 28 feet. The proposed two-level parking garage would accommodate approximately 62 independently accessible parking spaces or 100 valet parked spaces for the hotel in addition to about 79 spaces for the residential use.

The hotel would be a full-service facility with approximately 500 rooms, and an approximately 4,000 square-foot restaurant on the ground floor, about 1,000 square feet of retail use, and about 40,200 sq. ft. of meeting and conference space (Figures 2, 3, 4, 5, 6, 7, 8, 9, pages 3 to 10). The hotel would be specifically designed and operated to complement the Moscone Expansion III Project (Moscone West) currently under construction and due to open in 2003. The meeting spaces would include a main ballroom at over 7,200 sq. ft., two junior ballrooms, numerous meeting rooms of approximately 1,200 sq. ft. and a state-of-the-art equipped board room. Many of the meeting rooms would have direct access to a garden terrace on the third level. The fifth floor of the hotel would include a full-service health club and spa, including a 25-yard swimming pool. Guests would enter the hotel via a porte cochere on Howard Street on the east side of the building, which would also accommodate loading for two tourist buses. The restaurant would be on the southwest corner of the building fronting Fifth and Howard streets with the entrance on Howard Street. The retail space would be on Fifth Street.

Above the hotel would be ten floors of approximately 60 to 70 residential condominiums. Residents would have a separate lobby with concierge service on Fifth Street, two private elevators, and secured parking on the second level of the below grade parking garage. The approximately 79-space parking garage would have ingress and egress on Fifth Street. Residents would be able to select various services from the hotel and one of the hotel's service elevators would provide access to all floors of the condominiums. Residents would also have access to the hotel health club on the fifth floor.

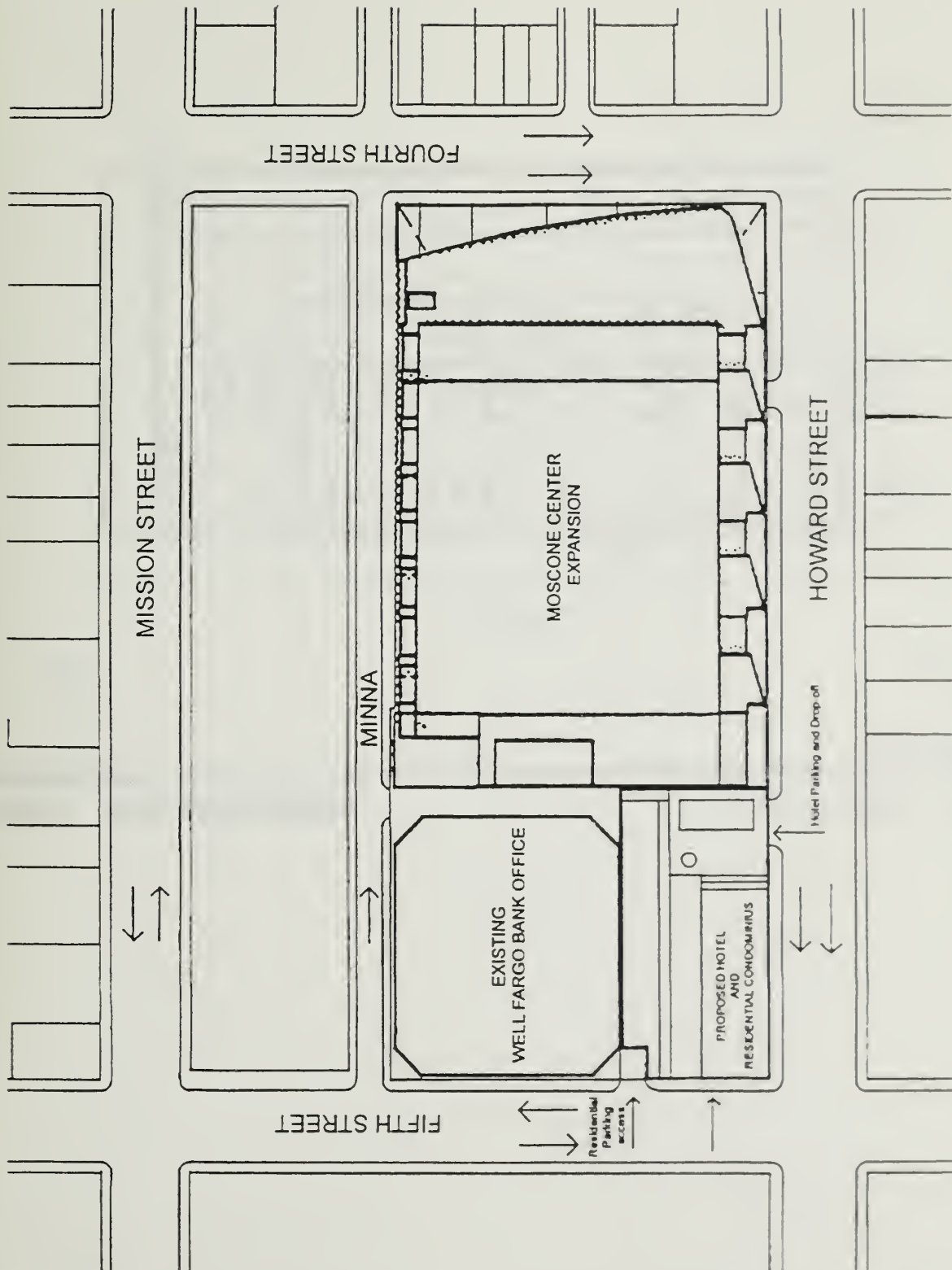
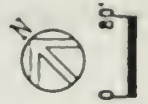
Two loading docks would be provided adjacent to the Wells Fargo Data Center on the north side and would be accessed via the porte cochere on Howard Street.

¹ Although Howard Street runs northeast to southwest, for descriptive purposes it is described as east-west



Source: During Associates

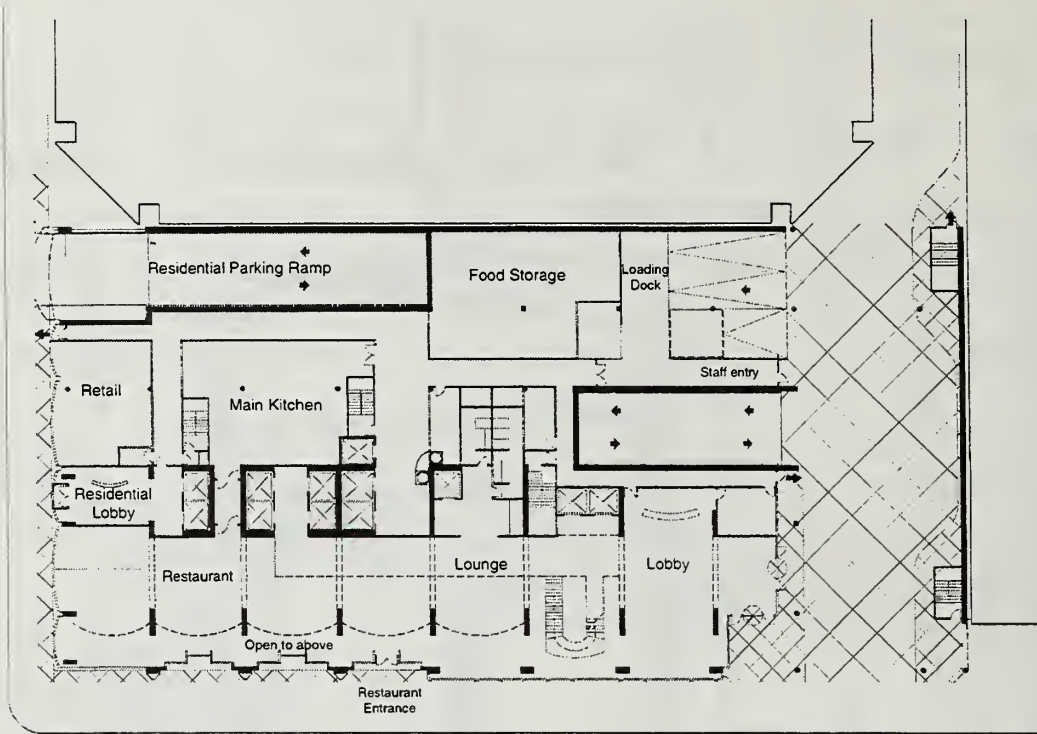
PROJECT LOCATION FIGURE 1



Source: Patn Merker Architects

SITE PLAN FIGURE 2

5th Street

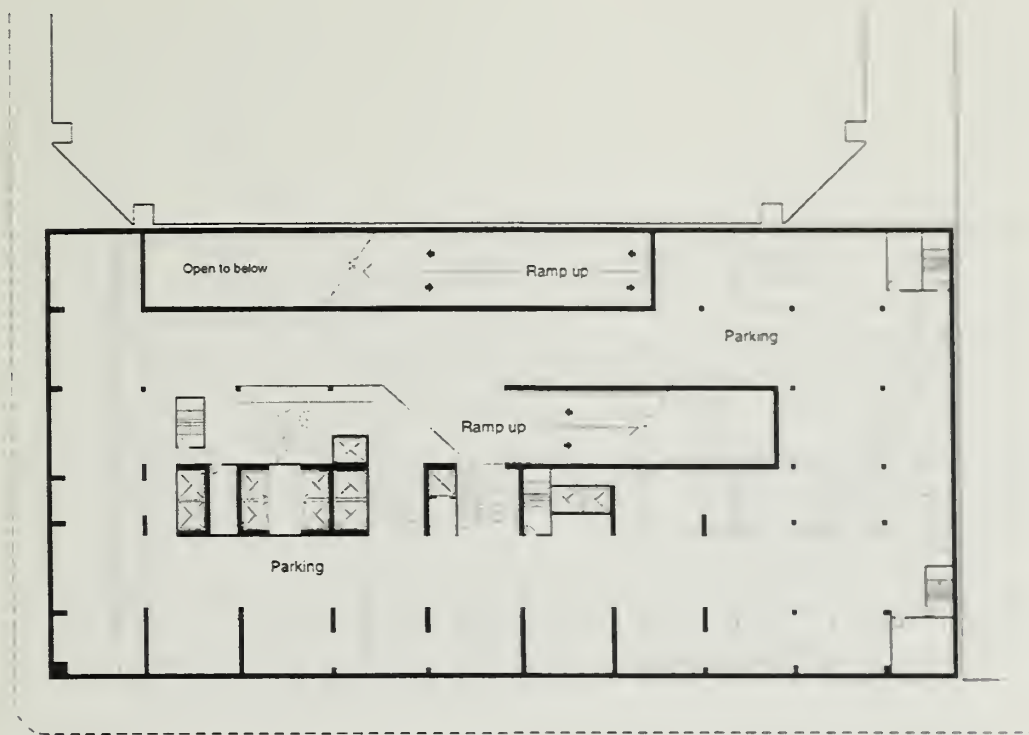


Howard Street



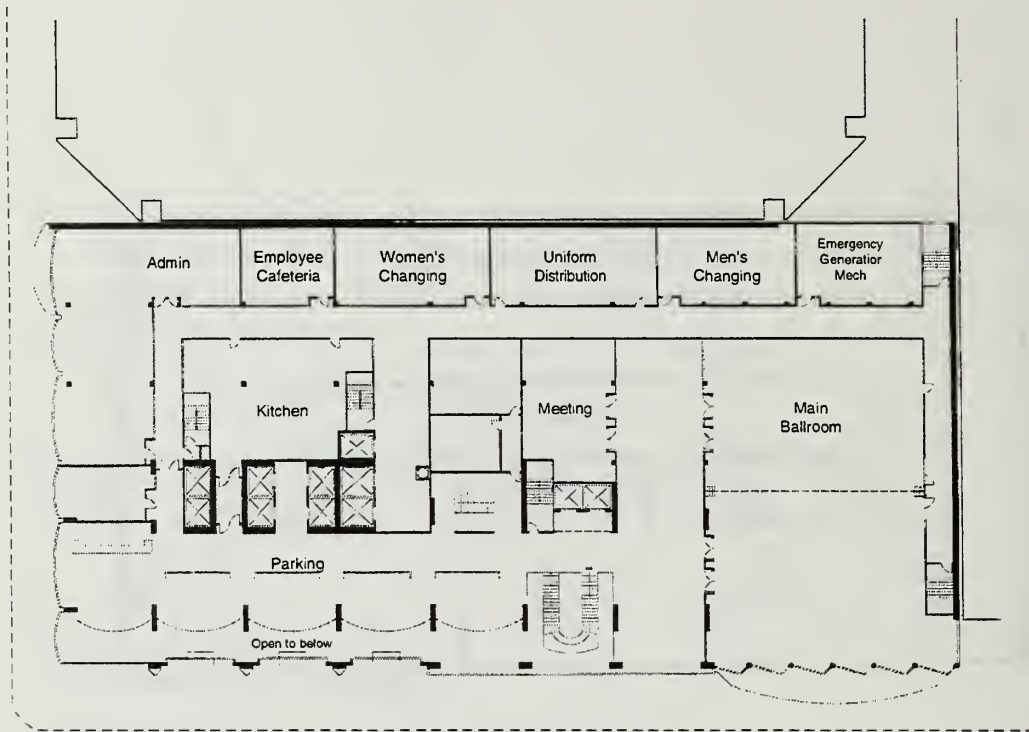
Source: Patri Merker Architects

GROUND FLOOR PLAN **FIGURE 3**



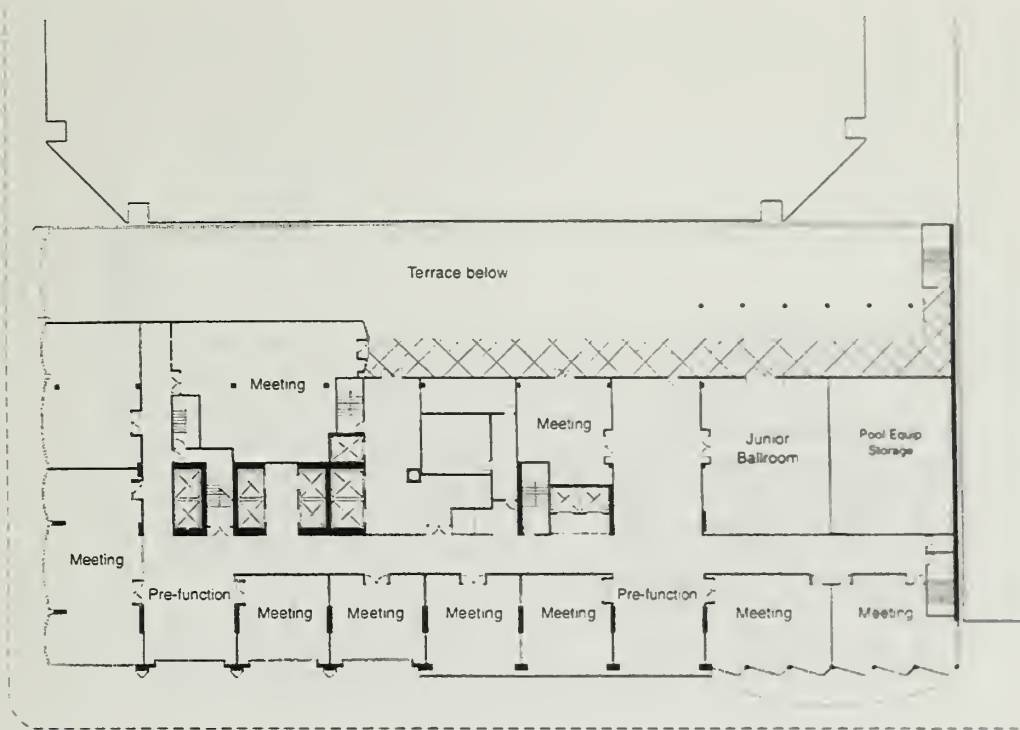
Source: Patri Merker Architects

LEVEL P-1 PLAN FIGURE 4



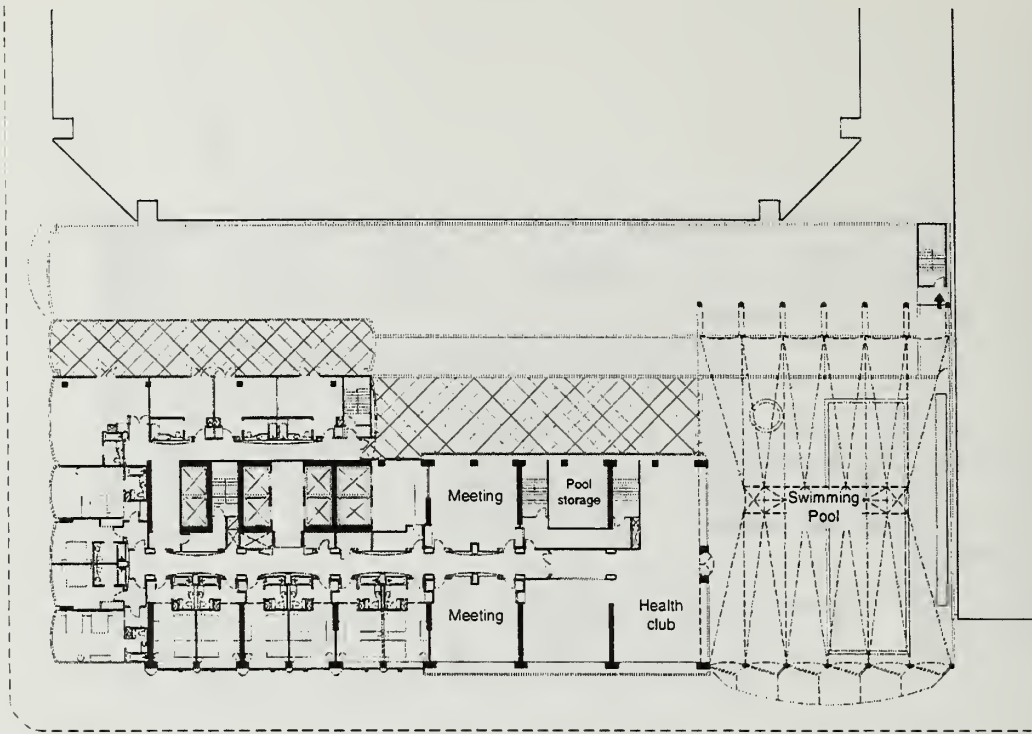
Source: Patri Merker Architects

SECOND FLOOR PLAN **FIGURE 5**



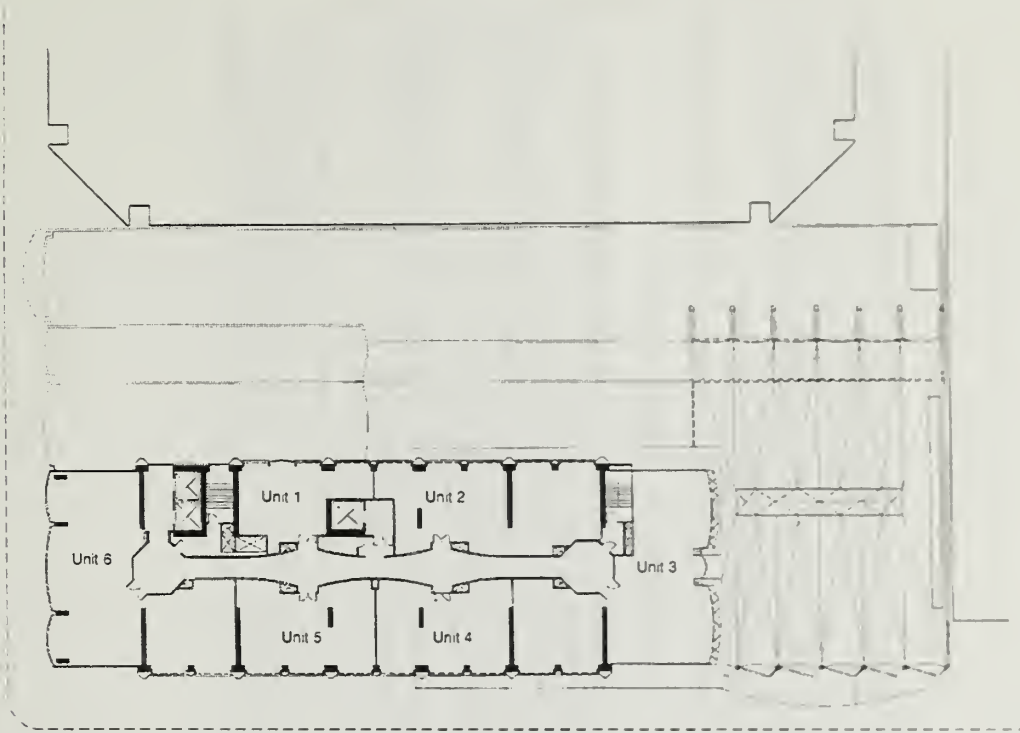
Source: Patri Merker Architects

FOURTH FLOOR PLAN FIGURE 6



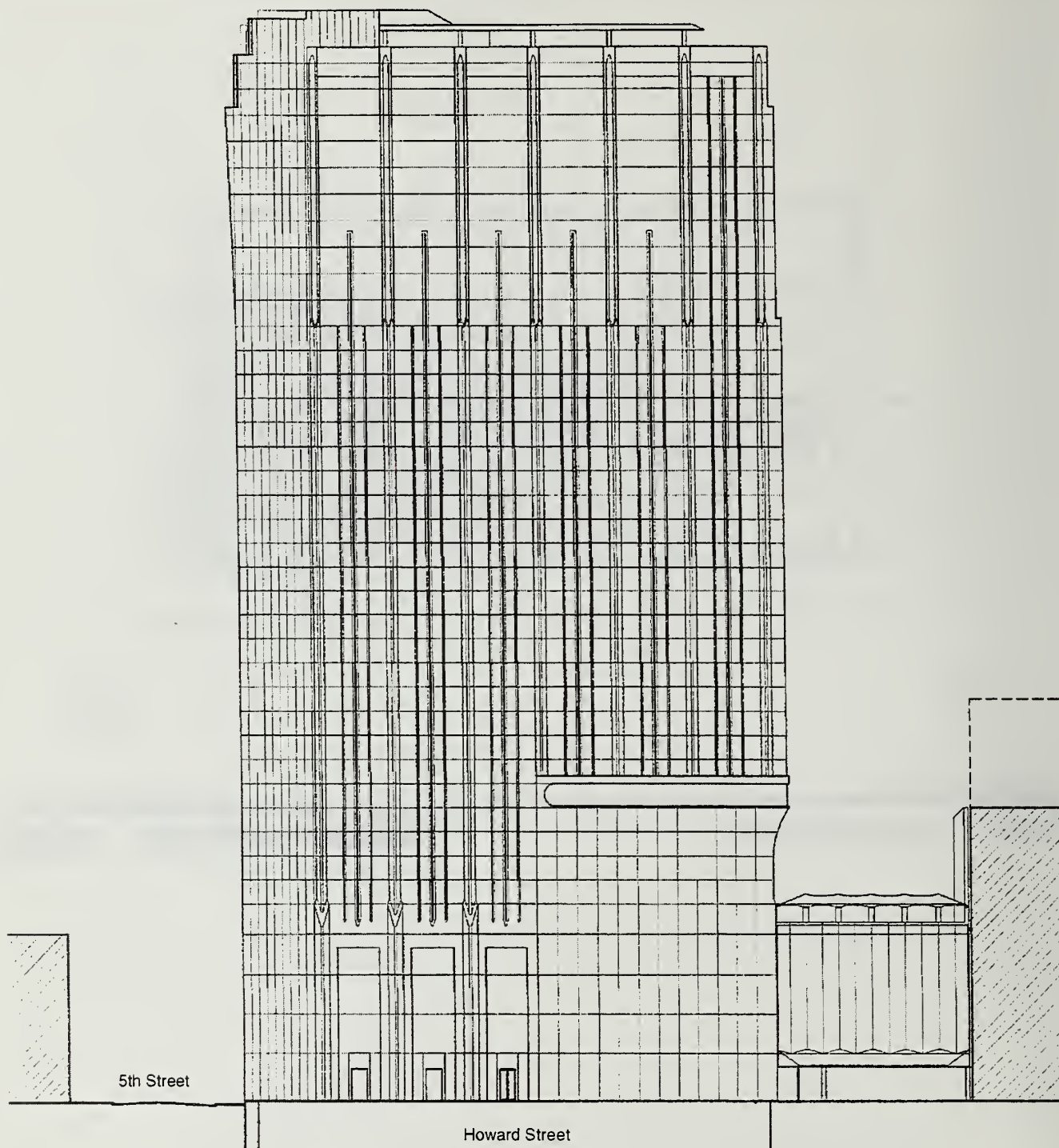
Source: Patri Merker Architects

FIFTH FLOOR PLAN **FIGURE 7**



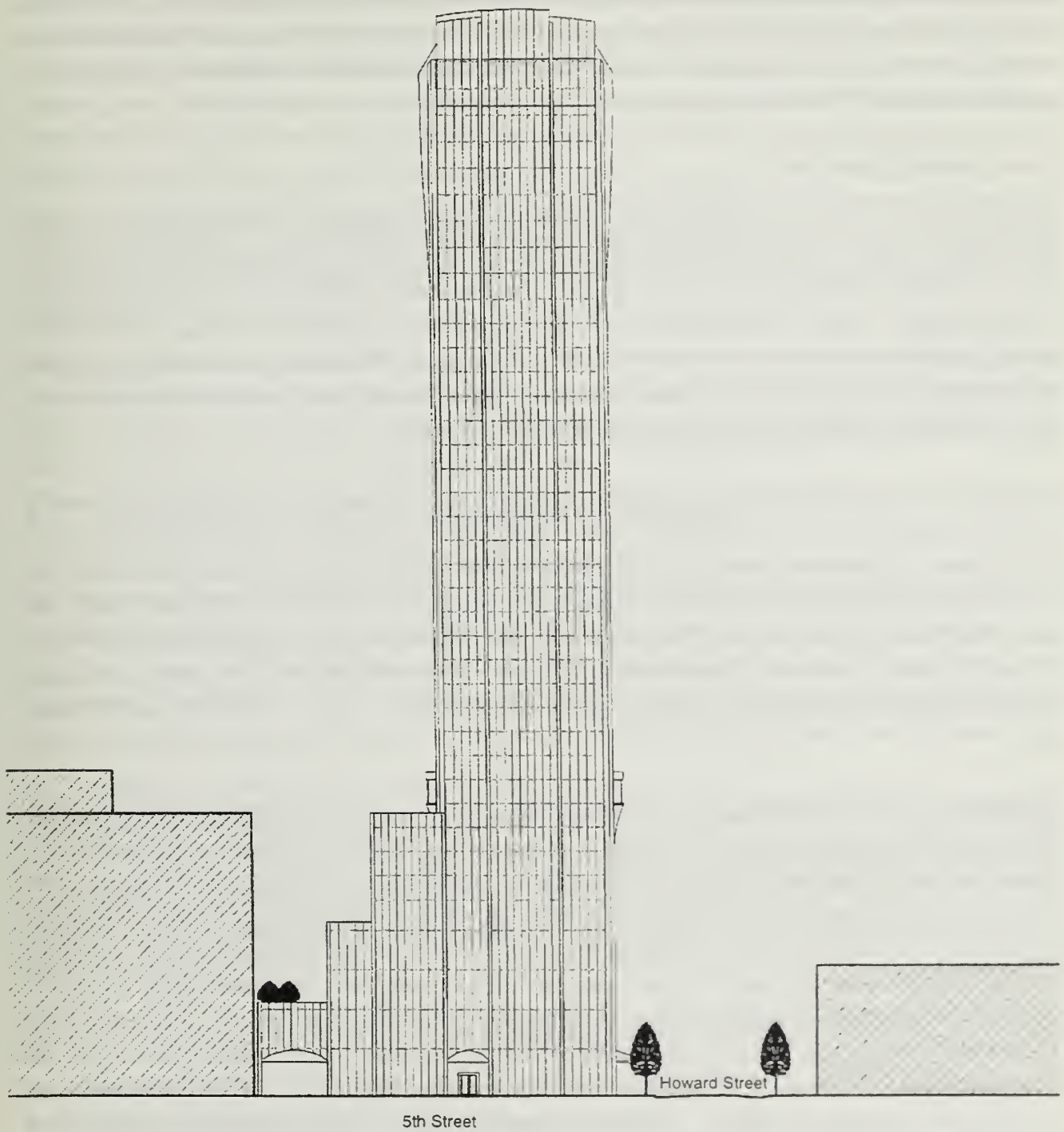
Source: Patri Merker Architects

RESIDENTIAL FLOOR PLAN **FIGURE 8**



Source: Patri Merker Architects

HOWARD STREET ELEVATION **FIGURE 9**



Source: Patri Merker Architects

FIFTH STREET ELEVATION **FIGURE 10**

The project site is in the South of Market neighborhood. It is zoned C-3-S (Downtown Commercial Support) District and in a 160-F Height and Bulk District. The allowable floor area ratio (FAR) in this district is 5:1, or 7.5:1 with transfer development rights (TDRs). Project construction would take about 25 months and would open in 2004. The project construction cost is estimated at \$88 million. The project sponsor is 888 Howard Street Associates, LLC, and the project architect is Patri Merker Architects.

B. PROJECT SETTING

The project site is in the South of Market area, just outside the southwest edge of the Yerba Buena Center (YBC) Redevelopment Area. The South of Market area east of the site and the YBC Redevelopment Area are occupied by office, commercial, hotel, along with museum and performing arts uses, including many recently-constructed and high-rise buildings. Further north of the site is the Financial District with high-rise office buildings up to 400 feet in height, most of relatively recent construction. The portion of the South of Market area to the south and west of the site is occupied primarily by two- to five-story buildings dating from the early part of the twentieth century, housing a mix of residential, retail, office, commercial, and light industrial uses.

Immediately to the north of the proposed project site on the same side of Howard Street, the Moscone Expansion III Project (Moscone West) is under construction. Further north, in the block bounded by Mission, Howard, Third, and Fourth Streets, is the northern block of the Moscone Center, with the five-story Metreon building on the north side of Fourth Street, the mid-block Yerba Buena Gardens, and the Visual Arts and Performing Arts Centers on the west side of Third Street. On the east side of Third Street, is the San Francisco Museum of Modern Art and the 30-story W Hotel is on the northeast corner of Howard and Third Streets. The southern block of the Moscone Center occupies the block bounded by Folsom, Howard, Third, and Fourth Streets, with Carousel, Zeum building, and ice skating rink.

Immediately north to the proposed project on Fifth and Minna Streets is a seven-story office building occupied by Wells Fargo Bank off Minna Street. Further north on the east side of Fifth Street, the seven-level Fifth and Mission Garage occupies the area bounded by Minna, Mission, Fourth, and Fifth Streets. Further north, the eight-story Hotel Pickwick is on the northeast corner of Mission and Fifth Streets, with a two-story building used for parking adjacent to Hotel Pickwick. On the west side of Fifth Street, on the northwest corner of Fifth and Mission Streets, is the closed historic US Mint Museum building. The block bounded by Fifth, Mission, Minna, and Mary Streets is occupied by the San Francisco Newspaper Agency building, which extends over Minna Street to the south. The eastern portion of this block is occupied by private surface parking serving the Newspaper Agency building (formerly the San Francisco Chronicle Building). In the block bounded by Mission, Jessie, Fourth and Fifth is the planned retail and hotel project in the Emporium complex. Opposite the proposed project site, at the southwest corner of Natoma and Fifth Streets is a private parking area, with a two-story commercial building further south, and a five-story building with a ground-floor restaurant and residential units above on the northwest corner of Howard and Fifth Streets.

On the south side of Howard Street, between Fourth and Fifth Streets, there is a nine-story senior housing facility at the south corner of Fourth and Howard Streets. To the west of this building on the south side of Howard Street is a two-story commercial building, a landscaped parking area serving the 320 and 330 Clementina Towers to the south, a three-story commercial/office building, a vacant three-story commercial building, a three-story commercial/office

building, the two-story Pacific Gas and Electric Company Energy Center, and a two-story commercial building with a restaurant on the first floor. This commercial building is adjacent to the Burlington Coat Factory building, which faces the project site and extends to Fifth Street. The Burlington Coat Factory building houses a variety of retail outlets and other uses and is currently being renovated to include office/research, development and technology uses. The east portion of this building is six stories tall and the west portion, on the east corner of Fifth and Howard Streets, is three stories. The southwest corner of Fifth and Howard Streets is occupied by a surface parking lot, and on the northwest corner of Howard and Fifth Streets, opposite the proposed project site, is a five-story building with a ground-floor restaurant and residential units above. Between Fifth and Sixth Streets are a number of buildings two to five stories in height, most of which date from the early part of the twentieth century and contain printing, commercial office/research, development and technology, residential, live/work, hotel, restaurant/bar, auto repair uses and parking.

South of the proposed project site on Fifth Street, on the southeast corner of Tehama and Fifth Streets is a two-story commercial building, with an approximately 15-story apartment tower at the north corner of Clementina and Fifth Streets. Further west, Tehama Street is occupied by residential, live/work, and commercial buildings of one to eight stories in height, with the majority between two and four stories.

II. SUMMARY OF POTENTIAL ENVIRONMENTAL EFFECTS

A. EFFECTS FOUND TO BE POTENTIALLY SIGNIFICANT

The 888 Howard Street Mixed-Use Project is examined in this Initial Study to identify potential effects on the environment. On the basis of this study, project-specific effects that relate to visual quality and glare, transportation, air quality, shadow, and wind have been determined to be potentially significant, and will be analyzed in an Environmental Impact Report (EIR). In addition, the EIR will provide additional discussion of land use for informational purposes, although the impacts are determined in this Initial Study to be less than significant.

B. EFFECTS FOUND NOT TO BE SIGNIFICANT

The following potential environmental effects were determined either to be less than significant or to be reduced to a less than significant level through mitigation measures included in the Initial Study and project. These items are discussed in Section III below, and require no further environmental analysis in the EIR: Land Use, Population, Noise, Utilities/Public Services, Biology, Geology/Topography, Water, Energy/Natural Resources, Hazards, and Cultural Resources.

III. ENVIRONMENTAL EVALUATION CHECKLIST AND DISCUSSION

A. COMPATIBILITY WITH ZONING, PLANS AND POLICIES

- | | <u>N/A</u> | <u>Discussed</u> |
|--|--------------------------|-------------------------------------|
| 1. Discuss any variances, special authorizations, changes proposed to the City Planning Code or Zoning Map, if applicable. | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 2. Discuss any conflicts with any other adopted environmental plans and goals of the City or Region, if applicable. | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

The *San Francisco Planning Code*, which incorporates by reference the City's Zoning Maps, governs permitted uses, densities, and the configuration of buildings within San Francisco. Permits to construct new buildings (or to alter or

demolish existing ones) may not be issued unless either the proposed project conforms to the *Code*, or an exception is granted pursuant to provisions of the *Code*. The project would require Conditional Use authorization from the City Planning Commission, including a public hearing, for the hotel use, pursuant to Sections 216 and 303 of the *City Planning Code*.

The project site is located in a C-3-S (Downtown Commercial Support) District in San Francisco and a 160-F Height and Bulk District. The C-3-S District accommodates near the intensive downtown core areas important supporting functions such as wholesaling, printing, building services, secondary office space and parking. It also contains unique housing resources. In its eastern portion, the district also serves in part as an expansion area for offices, at a lesser intensity than in the Downtown Office District. At the time the district was created, it was identified as having been for the most part been underdeveloped in the past, with opportunities for major developments of new uses covering substantial areas.

Pursuant to Section 302 of the *City Planning Code*, the proposed project would require amendments to the Height, Bulk, FAR, and zoning designations of the site. The proposed change in the Height and Bulk District from 160-F to 400-M. The 400-M Height and Bulk District permits buildings up to a height of 400 feet plus mechanical penthouses, and, for portions of buildings over 100 feet, a maximum dimension of 250 feet and a maximum diagonal dimension of 300 feet. (The existing 160-F Height and Bulk District permits buildings up to a height of 160 feet, and, for portions of buildings over 80 feet, a maximum dimension of 110 feet and a maximum diagonal dimension of 140 feet.) The proposed zoning change is from the existing C-3-S (Downtown Commercial Support) zoning designation to C-3-S (SU), Downtown Commercial Support with Special Use Overlay for Hotel and Residential, to allow for a 7.5:1 FAR for hotel uses and no FAR requirement for Residential uses and related subsurface parking for each use. (In the C-3-S zone, the allowable FAR is 5:1, or 7.5:1 with TDRs.)

The project would also require amendments to the San Francisco *General Plan* corresponding to the changes in height, bulk, and density discussed above. The City's *General Plan*, which provides general policies and objectives to guide land use decisions, contains some policies which relate to physical environmental issues. The proposed project would not obviously or substantially conflict with any such adopted environmental plan or policy, although, as mentioned above, the proposed project is not consistent with height, bulk, and density provisions of the *General Plan*, and would require amendments to the *Plan*. In general, potential conflicts with the *General Plan* are considered by decision makers independently of the environmental review process, as part of the decision whether to approve or disapprove a proposed project. Conflicts either identified in this environmental document or not would be considered in that context, and would not alter the physical environmental effects of the proposed project.

The proposed project would require approval from the Department of Public Works for a lot split to create an individual parcel for the project from the existing lot that also includes the adjacent existing office building.

Environmental plans and policies are those, like the Bay Area *Air Quality Plan*, which directly address physical environmental issues and/or contain targets or standards which must be met in order to preserve or improve characteristics of the City's physical environment. The proposed project would not obviously or substantially conflict with any such adopted environmental plan or policy.

In November 1986, the voters of San Francisco approved *Proposition M, the Accountable Planning Initiative*, which added Section 101.1 to the *San Francisco Planning Code* to establish eight Priority Policies. These policies are: preservation and enhancement of neighborhood-serving retail uses; protection of neighborhood character; preservation and enhancement of affordable housing; discouragement of commuter automobiles; protection of industrial and service land uses from commercial office development and enhancement of resident employment and business ownership; maximization of earthquake preparedness; landmark and historic building preservation; and protection of open space. Prior to issuing a permit for any project which requires an Initial Study under CEQA; prior to issuing a permit for any demolition, conversion, or change of use; and prior to taking any action which requires a finding of consistency with the General Plan, the City is required to find that the proposed project or legislation is consistent with the Priority Policies. The case report and approval motions for the project will contain the analysis determining whether the proposed project is consistent with the Priority Policies.

The Planning Commission must certify the EIR as a complete and accurate environmental document for the project prior to taking any approval actions. As described above, the project would require Conditional Use authorization pursuant to Sections 216 and 303 of the *City Planning Code*, amendments to the Height, Bulk, FAR, and zoning designations of the site pursuant to Section 302 of the *City Planning Code* along with corresponding amendments to the San Francisco General Plan, and review as a project in a C-3 District under Section 309 of the *City Planning Code* by the City Planning Commission; approval from the Department of Public Works for a lot split; and a building permit from the Department of Building Inspection. Approvals necessary for the project and the relationship of the project to *Planning Code* requirements will be described in the EIR.

B. ENVIRONMENTAL EFFECTS

All items except Visual Quality and Glare, Transportation/Circulation, Air Quality, Shadow and Wind on the Initial Study Environmental Evaluation Checklist have been checked "No," indicating that, upon evaluation, staff has determined that the proposed project could not have a significant adverse environmental effect. For items where the conclusion is "To be Determined," the analysis will be included in the EIR. Several of the Checklist items have been checked "Discussed," indicating that the Initial Study text includes discussion about that particular issue. For all of the items checked "No" without a discussion, the conclusions regarding potential significant adverse environmental effects are based on field observation, staff experience and expertise on similar projects, and/or standard reference material available within the Planning Department such as the Department's *Transportation Guidelines for Environmental Review*, or the California Natural Diversity Data Base and maps, published by the California Department of Fish and Game. For each Checklist item, staff considered both the individual and cumulative impacts of the proposed project.

	<u>Yes</u>	<u>No</u>	<u>Discussed</u>
1. <u>Land Use</u> - Could the project:			
a. Disrupt or divide the physical arrangement of an established community?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
b. Have any substantial impact upon the existing character of the vicinity?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

The project site is located in the South of Market neighborhood. To the north and east of the site are office buildings, hotels, and museums and other cultural activities development, much of it of relatively recent construction, including the Moscone Center, Yerba Buena Gardens, and the Moscone Expansion III Project (Moscone West) currently under construction immediately northeast of the project site. To the south and west of the site is older, low-rise residential, commercial, and light industrial development, most of which dates from the first half of the twentieth century. The project site is, in part, currently occupied by a surface parking lot. The site consists of the southeast portion of a lot occupying the southwest side of the block bounded by Howard, Minna, Fourth, and Fifth Streets. The northwest portion of the lot that includes the proposed site is developed with a seven-story, 337,407-square-foot office building occupied by Wells Fargo Bank, plus a small utility building off Minna Street. This office building was constructed in the 1970s, and the parking lot on the project site has been in existence since at least 1970. Before that time, the project lot has been occupied by a variety of residential, commercial, and greenhouse agriculture uses.

The project would convert an existing surface parking use to a 39-story, high-rise, mixed-use development consisting of a hotel, residential condominiums, and a small amount (approximately 1,000 square feet) of retail space. The introduction of retail and transient and long-term residential uses to the project site will continue a wider trend of more intensive development in the South of Market and Yerba Buena Redevelopment Project areas.

The development of up to 561,000 square feet of hotel, residential, and retail uses in the area would not be a significant effect of the proposed project because it would be in an area that is intensively developed and that already supports substantial amounts of hotel, residential, cultural, and commercial development in surrounding blocks.

A market study commissioned by the project sponsor found that forecasted demand for hotel rooms in the area is strong, and would exceed the combined capacity of existing hotels, other proposed hotels, and the proposed project.² In addition, the area already includes residential uses, both in high-rise buildings to the east, and in low-rise and mid-rise buildings to the south. The project, however, would represent the largest concentration of hotel/residential space in the immediate area. As discussed in Project Setting, above, existing development to southwest of the proposed project site is largely low-rise, ranging from one to five stories in height. The proposed hotel/residential use would be similar in character to, although taller than, other commercial, residential, cultural, and hotel buildings located in the local area, and would be generally compatible with the prevailing urbanized character of the area. Because the project would be developed within the existing block and street configuration, it could not divide the physical arrangement of an established community.

In conclusion, the proposed project would not result in significant adverse land use impacts. However, the EIR will discuss land use for context and informational purposes.

Yes No Discussed

2. Visual Quality - Could the project:

- a. Have a substantial, demonstrable negative aesthetic effect?

To be Determined

² PKF Consulting, Report of the Potential Market Demand for a Proposed Hotel to be Located at 888 Howard Street, 26 May 2000.

- b. Substantially degrade or obstruct any scenic view or vista now observed from public areas?
- c. Generate obtrusive light or glare substantially impacting other properties?

To be Determined
☐ ☒ ☒
Aesthetic effect

Aesthetics and urban design are subjective fields, and individuals may hold differing opinions about the aesthetic design of any proposed project. The current proposal is no exception, and although the project design is intended to complement immediately surrounding buildings in terms of design and materials, the building, at 39 stories above ground, would be substantially taller than neighboring buildings, and others may feel differently upon studying the proposal.

The design of the proposed project would comply with Planning Commission Resolution No. 9212, which prohibits the use of mirrored or reflective glass. The proposed project would not contain mirrored glass, but would be illuminated at night, and would be prominent because of its height.

Due to the size of the proposed project and the potential visibility of the proposed new construction, the EIR will include visual simulations and a more detailed discussion of aesthetic effects.

Views

The topography of the area surrounding the site is flat, and existing development limits views from streets and sidewalks. Views currently available to the public in the vicinity of the project site are available from Yerba Buena Gardens, one block northeast of the project site, but views from Yerba Buena Gardens to the southwest toward the project site are limited by the five-story Metreon building between the Gardens and the site. Private buildings in the area may have views of hills to the west, the downtown skyline to the northeast, or beyond. Views from public streets or private properties may be altered by the proposed construction, although this effect would be limited by the fact that the neighborhood is already densely developed. Due to the height and configuration of the proposed new construction, the EIR will include a more detailed discussion of effects on views.

	<u>Yes</u>	<u>No</u>	<u>Discussed</u>
3. <u>Population</u> - Could the project:			
a. Induce substantial growth or concentration of population?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
b. Displace a large number of people (involving either housing or employment)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
c. Create a substantial demand for additional housing in San Francisco, or substantially reduce the housing supply?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

The addition of 60 to 70 residential units, approximately 1,000 square feet of retail space, and 433,000 square feet of hotel space including 500 hotel rooms would increase the daily population on the project site by up to

approximately 1,275 people. This figure is based on a density of 1.37 persons per residential condominium³, one retail employee per 350 gross square feet of retail space⁴, an average of 1.69 guests per room and an 80 percent room occupancy rate⁵, and one hotel employee per room⁶. While potentially noticeable to the immediately adjacent neighbors, this population increase would be small relative to the existing population of the concentrated cultural, hotel, commercial and residential uses in the project area, and would not be a significant impact of the proposed project. The physical environmental effects of this increase in population on site will be addressed, primarily in the transportation and air quality sections of the EIR.

The project would create about 503 new jobs on the site. Many of the employees of the proposed project would already be living in the City. Others would come from outside San Francisco, and may seek housing within the City boundaries. Those who continue to live in outlying areas and commute into the City would contribute to potential transportation impacts, which will be addressed in the EIR. The project sponsor intends to attract as many employees as possible from the immediate neighborhood by training programs targeted at the local community, and support of local training programs including the South of Market Employment Center. As part of the Planning Commission's consideration of the project sponsor's request for conditional use authorization, the Commission would consider the issue of employment-generated housing demand. Specifically, Section 303(f) of the City Planning Code requires that *the Commission consider the impact of the employees of the hotel or motel on the demand in the City for housing, public transit, childcare, and other social services. To the extent relevant, the Commission shall also consider the seasonal and part-time nature of employment in the hotel or motel; and the measures that will be taken by the project sponsor to employ residents of San Francisco in order to minimize increased demand for regional transportation.*

Since there is no existing building on the project site, the project would not displace existing employees, residents or reduce the housing supply.

Yes No Discussed

4. Transportation/Circulation - Could the project:

- | | |
|--|-------------------------|
| a. Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system? | <u>To be Determined</u> |
| b. Interfere with existing transportation systems, causing substantial alterations to circulation patterns or major traffic hazards? | <u>To be Determined</u> |

³ Residential density for Downtown Planning District from: Planning Department, City and County of San Francisco, San Francisco Atlas, October 1991.

⁴ City and County of San Francisco, Department of City Planning, *Guidelines for Environmental Review: Transportation Impacts*, Appendix 1, July 1991.

⁵ Dale Hess, Executive Vice President, San Francisco Convention and Visitors Bureau, personal communication, 26 October 2000.

⁶ Faith Raider, Research Analyst, Hotel and Restaurant Employees Union Local 12, personal communication, 27 October 2000.

- c. Cause a substantial increase in transit demand which cannot be accommodated by existing or proposed transit capacity? To be Determined
- d. Cause a substantial increase in parking demand which cannot be accommodated by existing parking facilities? To be Determined

The proposed project would include 141 parking spaces for hotel guests and residents, and two loading dock spaces. The increase in employees and guests on the project site would result in increased demands on the local transportation system, including increased traffic, transit demand, and parking demand. A Transportation Study will be conducted by a transportation consultant under the supervision of the Planning Department. The study will address the impacts of the proposed project on traffic and vehicular circulation, transit, pedestrian circulation, bicycling, parking, freight loading during project construction and occupancy, and cumulative traffic impacts.

	<u>Yes</u>	<u>No</u>	<u>Discussed</u>
5. <u>Noise</u> - Could the project:			
a. Increase substantially the ambient noise levels for adjoining areas?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
b. Violate Title 24 Noise Insulation Standards, if applicable?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
c. Be substantially impacted by existing noise levels?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Project Operation

The noise generated by occupancy of the proposed hotel and residential units would not be considered a significant impact of the project. Noise generated by residential and hotel uses is common and generally accepted in urban areas, particularly in mixed hotel/residential/commercial/cultural areas such as the project vicinity. In addition, based on published scientific acoustic studies, the traffic volumes in the project area would need approximately to double to produce an increase in ambient noise levels noticeable to most people in the area. As the proposed project's uses would not cause doubling of the traffic volumes in the project area, the proposed project would not cause a noticeable nor significant increase in the ambient noise levels in the area.

The location of the proposed project within a mixed residential/hotel and nonresidential use area could result in the exposure of future residents to existing noise associated with the business activity in the area (e.g., early morning truck deliveries to businesses in the area). Title 24 of the California Code of Regulations establishes uniform noise insulation standards for projects where people will reside (including hotels and motels). The Department of Building Inspection would review the final building plans to insure that the building wall and floor/ceiling assemblies meet State standards regarding sound transmission.

Hence, operational noise requires no further analysis and will not be discussed in the EIR.

Project Construction

Construction of the proposed project would occur over a period of about 25 months. The project would have a mat foundation and piles would not be necessary. The proposed construction could generate noise and possibly vibration that may be considered an annoyance by occupants of nearby properties. The noise levels at receptors near the project

site would depend on their distance from the noise source and on the presence or absence of noise barriers. The noise would be most noticeable along the frontage of the construction area and decrease with distance. However, due to the temporary and intermittent nature of this impact, and the relatively higher urban noise levels existing in the immediate area, it would not be significant. Construction noise is regulated by the San Francisco Noise Ordinance (Article 29 of the San Francisco Police Code). The Noise Ordinance requires that project construction work be conducted in the following manner: 1.) noise levels of construction equipment, other than impact tools, must not exceed 80 decibels (measured as dBA; a unit of measure for sound - "A" denotes use of the A-weighted scale, which simulates the response to the human ear to various frequencies of sound) at a distance of 100 feet from the source; i.e., the equipment generating the noise; 2.) impact tools must have intake and exhaust mufflers that are approved by the Director of the Department of Public Works to best accomplish maximum noise reduction; and 3.) if the noise from the construction work would exceed the ambient noise levels at the property line of the site by five dBA, the work must not be conducted between 8:00 p.m. and 7:00 a.m., unless the Director of the Department of Public Works authorizes a special permit for conducting the work during that period.

Because project construction noise would be temporary and intermittent and thus would not be considered significant, construction noise requires no further analysis and will not be addressed in the EIR.

	<u>Yes</u>	<u>No</u>	<u>Discussed</u>
6. <u>Air Quality/Climate</u> - Could the project:			
a. Violate any ambient air quality standard or contribute substantially to an existing or projected air quality violation?			<u>To be Determined</u>
b. Expose sensitive receptors to substantial pollutant concentrations?			<u>To be Determined</u>
c. Permeate its vicinity with objectionable odors?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Alter wind, moisture or temperature (including sun shading effects) so as to substantially affect public areas, or change the climate either in the community or region?			<u>To be Determined</u>

Air Quality

The Bay Area Air Quality Management District (BAAQMD) has identified size thresholds for various land uses, which, based on default assumptions, would result in mobile source emissions exceeding the District's threshold of significance for nitrogen oxides (NO_x).⁷ The District recommends more detailed analysis for any project whose size is near or exceeds the threshold. The proposed number of hotel rooms exceeds the District's threshold. Therefore, air quality impacts, including project construction and local and regional impacts of project operation, will be analyzed in the EIR.

⁷ Bay Area Air Quality Management District, *BAAQMD CEQA Guidelines, Assessing the Air Quality Impacts of Projects and Plans*, April 1996, Revised December 1999.

Shadow

The new 888 Howard Street Mixed-Use building would be 39 stories tall, which would increase the amount of shadow on area streets and sidewalks and adjacent properties at certain times of the day and year. Section 295 of the *San Francisco Planning Code* was adopted in response to Proposition K (passed in November 1984) in order to protect certain public open spaces from shadowing by new structures during the period between one hour after sunrise and one hour before sunset, year round. Section 295 restricts new shadow upon public spaces under the jurisdiction of the Recreation and Park Department by any structure exceeding 40 feet unless the Planning Commission finds the impact to be insignificant. To determine whether the proposed project would conform with Section 295, an application for a shadow fan analysis was submitted to the Planning Department. The results of the shadow analysis will be discussed in the EIR.

Wind

Wind conditions partly determine pedestrian comfort on sidewalks and in other public areas. In downtown areas, tall buildings can redirect wind flows around and down to street level, resulting in increased wind speed and turbulence at street level. The proposed building would be approximately 398 feet high (plus mechanical), with its long axis oriented northeast-southwest, parallel to Howard Street. The building's frontage on Fifth Street and its northwest side would be the building faces most exposed to the winds from the west. A Wind Study will be conducted by a meteorological consultant under the supervision of the Planning Department. The study will address the impacts of wind generated by the proposed project, and the results of the study will be discussed in the EIR.

	<u>Yes</u>	<u>No</u>	<u>Discussed</u>
7. <u>Utilities/Public Services</u> - Could the project:			
a. Breach published national, state or local standards relating to solid waste or litter control?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Extend a sewer trunk line with capacity to serve new development?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Substantially increase demand for schools, recreation or other public facilities?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Require major expansion of power, water, or communications facilities?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

The proposed project would incrementally increase demand for and use of public services and utilities on the project site, but not in excess of amounts expected and provided for in the project area. The project would be undertaken in a fully built-out area of downtown San Francisco, where all services and utilities are currently provided. No need for any expansion of public service or public utilities is anticipated. The new buildings would be designed to incorporate water-conserving measures such as low-flush toilets and urinals, as required by California State Building Code Section 402.0(c). In conclusion, the proposed project would not result in significant adverse impacts on public services and utilities. Therefore, the EIR will not discuss public services and utilities.

	<u>Yes</u>	<u>No</u>	<u>Discussed</u>
8. <u>Biology</u> - Could the project:			
a. Substantially affect a rare or endangered species of animal or plant, or the habitat of the species?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
b. Substantially diminish habitat for fish, wildlife or plants, or interfere substantially with the movement of any resident or migratory fish or wildlife species?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
c. Require removal of substantial numbers of mature, scenic trees?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Almost all of the project site is covered with impervious surfaces and it is located within an urban area which has been developed since the late nineteenth century. There are seven mature non-native street trees located on the perimeter of the site and some grass landscaping, but no significant wildlife habitat exists on the site. Development on the site would not affect any plant or animal habitats or interfere with the movement of any resident or migratory animal species. The publicly-accessible open space at street level and on the third-, fourth-, and fifth-floor terraces proposed as part of the project would include street trees and other vegetation appropriate for the urban landscape of the project site. In conclusion, the proposed project would not result in significant adverse impacts on biology. Therefore, the EIR will not discuss biology.

	<u>Yes</u>	<u>No</u>	<u>Discussed</u>
9. <u>Geology/Topography</u> - Could the project:			
a. Expose people or structures to major geologic hazards (slides, subsidence, erosion and liquefaction)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
b. Change substantially the topography or any unique geologic or physical features of the site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The project site is flat, with an approximate surface elevation of 12 to 15 feet. Based on borings taken in the course of the Phase I and Limited Phase II Environmental Site Assessment completed for the site, the project site is underlain by eight to 15 feet of fill, at varying depths across the site. The fill consists of loose to medium dense silty sand and silty sand with varying amounts of brick, tar, and glass fragments. Underlying the fill is a silty sand layer consisting of medium dense to very dense sand with variable amounts of silt approximately 20 to 35 feet thick. The depth to groundwater is believed to be approximately 22 to 27 feet below existing grade.⁸

Construction of foundations and two below-grade parking levels for the proposed project would require excavation to a maximum depth of 28 feet. Approximately 39,275 cubic yards of soil would be removed. Given the depth to groundwater, it is anticipated that temporary dewatering would be required during construction. If dewatering were necessary, the final soils report would address the potential settlement and subsidence impacts of this dewatering. Based on this discussion, the soils report would determine whether or not a lateral movement and settlement survey

⁸ Treadwell & Rollo, *Phase I and Limited Phase II Environmental Site Assessment*, 888 Howard Street, San Francisco, California, 2 August 2000. This report is available for public review in Project File No. 2000.790E at the Planning Department, 1660 Mission Street, fifth floor, San Francisco.

should be done to monitor any movement or settlement of surrounding buildings and adjacent streets. If a monitoring survey were recommended, the Department of Building Inspection would require that a Special Inspector (as defined in Article 3 of the Building Code) be retained by the project sponsor to perform this monitoring. Groundwater observation wells would be installed to monitor potential settlement and subsidence. If, in the judgement of the Special Inspector, unacceptable movement were to occur during construction, groundwater recharge would be used to halt this settlement. The project sponsor would delay construction if necessary. Costs for the survey and any necessary repairs to service lines under the street would be borne by the project sponsor.

The *San Francisco General Plan Community Safety Element* contains maps that show areas in the City subject to geologic hazards. The project site is located in an area subject to groundshaking from earthquakes along the San Andreas and Northern Hayward faults and other faults in the San Francisco Bay Area (See Maps 2 and 3 in the Community Safety Element). The closest active faults are the San Andreas Fault, approximately eight miles southwest of the project site, and the Hayward Fault, about 16 miles northeast of the project site. As is the entire San Francisco Bay Area, the proposed project site is subject to groundshaking in the event of an earthquake on these faults, although surface rupture is not likely.

The project site is also located in an area of liquefaction potential, in a Seismic Hazards Study Zone (SHSZ) designated by the California Division of Mines and Geology.⁹ For any development proposal in an area of liquefaction potential, the Department of Building Inspection (DBI) will, in its review of the building permit application, require the project sponsor to prepare a geotechnical report pursuant to the State Seismic Hazards Mapping Act. The report would assess the nature and severity of the hazard(s) on the site and recommend project design and construction features that would reduce the hazards(s).

To ensure compliance with all *San Francisco Building Code* provisions regarding structural safety, when DBI reviews the geotechnical report and building plans for the proposed project, it will determine necessary engineering and design features for the project to reduce potential damage to structures from groundshaking and liquefaction. Therefore, potential damage to structures from geologic hazards on the project site would be mitigated through the DBI requirement for a geotechnical report and review of the building permit application pursuant to its implementation of the *Building Code*. The EIR will not address geology and soils.

	<u>Yes</u>	<u>No</u>	<u>Discussed</u>
10. <u>Water</u> - Could the project:			
a. Substantially degrade water quality, or contaminate a public water supply?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
b. Substantially degrade or deplete ground water resources, or interfere substantially with ground water recharge?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
c. Cause substantial flooding, erosion or siltation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

⁹ City and County of San Francisco, *Community Safety Element, San Francisco General Plan*, April 1997.

Based on a recent report prepared by Treadwell and Rollo, groundwater at the site is believed to be 22 to 27 feet below the ground surface.¹⁰ Groundwater at the site is currently being affected by dewatering for the construction project for the Moscone Expansion III Project that is located adjacent to the proposed project site. Regional groundwater flow in the area is assumed to be to the east, towards San Francisco Bay.

Any groundwater encountered during construction of the proposed project would be subject to requirements of the City's Industrial Waste Ordinance (Ordinance Number 199-77), requiring that groundwater meet specified water quality standards before it may be discharged into the sewer system. The Bureau of System Planning, Environment, and Compliance (SPEAC) of the San Francisco Public Utilities Commission must be notified of projects necessitating dewatering, and may require groundwater analysis before discharge. Potential degradation of groundwater quality as a result of dewatering during project construction would be reduced to a less than significant level through SPEAC requirement for retention of groundwater pumped from the project site in a holding tank, and analysis of the quality of this groundwater before it is discharged to the combined sanitary and storm drain sewer system.

Almost all of the project site is currently covered by impervious surfaces. Site drainage would be redesigned to take into account the below-grade structure, but site runoff would continue to drain to the City's combined storm and sanitary sewer and be treated at the Southwest Water Pollution Control Plant prior to discharge to San Francisco Bay. Wastewater treatment would be provided pursuant to the effluent discharge limitations set by the Plant's National Pollutant Discharge Elimination System (NPDES) Permit. The foundation and portions of the building below grade would be water tight to avoid the need to permanently pump and discharge water. Natural groundwater flow would continue under and around the site. The project, therefore, would not substantially alter existing groundwater quality or flow conditions.

In conclusion, the proposed project would not result in significant adverse impacts on surface water or groundwater quality. Therefore, the EIR will not discuss water.

	<u>Yes</u>	<u>No</u>	<u>Discussed</u>
11. <u>Energy/Natural Resources</u> - Could the project:			
a. Encourage activities which result in the use of large amounts of fuel, water, or energy, or use these in a wasteful manner?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
b. Have a substantial effect on the potential use, extraction, or depletion of a natural resource?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

¹⁰ Treadwell & Rollo, *Phase I and Limited Phase II Environmental Site Assessment*, 888 Howard Street, San Francisco, California, 2 August 2000. This report is available for public review in Project File No. 2000.790E at the Planning Department, 1660 Mission Street, fifth floor, San Francisco.

The Department of Building Inspection requires that the design of new buildings in San Francisco is required to conform to energy conservation standards specified by Title 24 of the *California Code of Regulations*. Documentation showing compliance with these standards is submitted with the application for the building permit. Title 24 is enforced by the Department of Building Inspection. Therefore, no further analysis of energy is required, and the EIR will not discuss energy.

	<u>Yes</u>	<u>No</u>	<u>Discussed</u>
12. <u>Hazards</u> - Could the project:			
a. Create a potential public health hazard or involve the use, production or disposal of materials which pose a hazard to people or animal or plant populations in the area affected?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
b. Interfere with emergency response plans or emergency evacuation plans?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
c. Create a potentially substantial fire hazard?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

This section addresses the potential hazardous materials on the project site, including Underground Storage Tanks (USTs), contaminants in the soils, and fire hazards.

Phase I and Limited Phase II Environmental Site Assessments (ESAs) were conducted for the project by Treadwell & Rollo in August 2000¹¹. The ESAs described the land use history of the project site and area that may have involved handling, storage, or disposal of hazardous materials that could have affected the quality of soils or groundwater, and analyzed soil samples taken on the site for the presence of chemically-affected soil on the project property.

Underground Storage Tanks

The site was occupied by a variety of commercial uses from 1887 to 1970, when it was converted to a parking lot. Based on the age of the previous buildings that have occupied the site, it is unknown if underground storage tanks are located on the site. Though no records exist indicating that underground storage tanks are located on the site, many underground storage tanks were not registered with the City and County of San Francisco and/or the San Francisco Fire Department. Implementation of Mitigation Measure Number 2 by the project sponsor in the Mitigation Measures section of the Initial Study would reduce potential impacts related to the possible presence of underground storage tanks to a less-than-significant level.

Soil Contamination

¹¹ Treadwell & Rollo, *Phase I and Limited Phase II Environmental Site Assessment, 888 Howard Street, San Francisco, California*, 2 August 2000. This report is available for public review in Project File No 2000.790E at the Planning Department, 1660 Mission Street, fifth floor, San Francisco

The site is underlain by approximately eight to 15 feet of fill material composed of loose to medium dense silty sand and silty sand with varying amounts of brick, tar, and glass fragments. A silty sand layer consisting of medium dense to very dense sand with variable amounts of silt approximately 20 to 35 feet thick underlies the fill material. A limited subsurface soil investigation was conducted as part of the Phase I and Phase II ESAs to assess the presence of regulated chemical compounds in the fill soil beneath the site. Four soil borings were drilled to a depth of 15 feet or more near the four corners of the site in June 2000. A total of 12 samples, collected at various depths from each of the four borings, was submitted for laboratory analysis. All samples were analyzed for total recoverable petroleum hydrocarbons (TRPH); total petroleum hydrocarbons as gasoline, diesel, and motor oil (TPH(g), TPH(d), and TPH(mo), respectively); benzene, toluene, ethylbenzene, and xylenes (BTEX); methyl tertiary butyl ether (MTBE); and total lead. Some samples were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), cadmium, chromium, nickel, and zinc. Selected samples with elevated concentrations of total lead (greater than 50 parts per million) were also analyzed for soluble lead.

No gasoline, BTEX, MTBE, or VOCs were detected at or above the analytical method reporting limits in the soil samples analyzed. Diesel was detected at a concentration of 1.3 milligrams per kilogram from one sample. Low levels of total petroleum hydrocarbons as motor oil were detected in three of the 12 samples analyzed, at concentrations ranging from 32 to 860 ppm. Low levels of total recoverable petroleum hydrocarbons (TRPH) were detected in three of the 12 samples analyzed, at concentrations ranging from 30 to 65 ppm. Low levels of chromium, nickel, and zinc were detected in two samples. Di-n-butylphthalate was the only SVOC detected, at a concentration of 2,200 micrograms per kilogram in one sample.

Total lead was detected in six of the 11 soil samples submitted for chemical analysis at concentrations ranging from 6.6 to 280 ppm. Two samples contained lead levels above 50 ppm, at concentrations of 150 ppm and 280 ppm. Based on these results, these two soil samples were submitted for further analytical testing for soluble lead using the Soluble Threshold Limit Concentration (STLC) by California Waste Extraction Test (WET) method and Federal Toxicity Characteristic Leaching Potential (TCLP) analyses. STLC lead was detected in the two selected samples analyzed, at concentrations of 2.6 and 0.27 ppm. TCLP lead was not detected at or above the method reporting limits in the two samples analyzed.

Construction of the new building at 888 Howard Street would entail excavation of about 39,275 cubic yards of soil. Because hazardous materials were detected in the soils on the site, a Site Mitigation Plan (SMP) and a Health and Safety (H&S) Plan would be required prior to construction. The project sponsor has agreed to implement Mitigation Measure Number 3 in the Mitigation Measures section of the Initial Study, which would ensure that any potential impacts due to the presence of petroleum hydrocarbons, heavy metals, or other hazardous materials in soils on the project site would be reduced to a less than significant level.

Fire Hazards

San Francisco ensures fire safety primarily through provisions of the Building Code and the Fire Code. Existing buildings are required to meet standards contained in these codes. In addition, the final building plans for any new residential project greater than two units are reviewed by the San Francisco Fire Department (as well as the

Department of Building Inspection), in order to ensure conformance with these provisions. The proposed project would conform to these standards, including development of an emergency procedure manual and an exit drill plan. In this way, potential fire hazards (including those associated with hillside development, hydrant water pressure, and emergency access) would be mitigated during the permit review process.

Occupants of the proposed building would contribute to congestion if an emergency evacuation of the South of Market area were required. Section 12.202(e)(1) of the San Francisco Fire Code requires that all owners of high-rise buildings (over 75 feet) "shall establish or cause to be established procedures to be followed in case of fire or other emergencies. All such procedures shall be reviewed and approved by the chief of division." Additionally, project construction would have to conform to the provisions of the Building and Fire Codes which require additional life-safety protections for high-rise buildings.

In conclusion, potential public health and safety hazards related to the possible presence of underground storage tanks, soil contaminated with petroleum hydrocarbons and heavy metals on the project site, and potential fire hazards in the new building would be reduced to a less than significant level as a result of regulations and procedures already established as part of the review process for building permits and mitigation proposed as part of the project. Therefore, the EIR will not discuss hazards.

	<u>Yes</u>	<u>No</u>	<u>Discussed</u>
13. <u>Cultural</u> - Could the project:			
a. Disrupt or adversely affect a prehistoric or historic archaeological site or a property of historic or cultural significance to a community, ethnic or social group; or a paleontological site except as a part of a scientific study?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
b. Conflict with established recreational, educational, religious or scientific uses of the area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
c. Conflict with the preservation of buildings subject to the provisions of Article 10 or (proposed) Article 11 of the City Planning Code?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Prehistoric and Historic Archaeological Resources

A cultural resources evaluation of the project site was completed by an independent consultant and is summarized here.¹² Archival data indicate that between 1776 and the early- to mid-1850s, the project site remained in a natural

¹² Allen G. Pastron, PhD., *Archival Cultural Resources Evaluation of the 888 Howard Street Hotel and Residential Development Project, San Francisco, California*, November 2000. This report is available for public review in Project File No. 2000.790E: 888 at the Planning Department, 1660 Mission Street, San Francisco, CA.

state, unoccupied and unexploited. Filling and grading of the bay marshes in the South of Market area began during the early 1850s.

Although no prehistoric resources are known to exist within the confines of the present project site, available documented evidence suggests a possibility of significant prehistoric/protohistoric archaeological remains within the confines of the subject property. Previous archaeological research in San Francisco suggests that the subject parcels and their immediate surroundings would have represented a generally favorable habitat for Native American hunters and gatherers. The presence of deeply buried cultural deposits as near as two blocks from the site dictates that caution be exercised before concluding that such resources do not exist. Archival resources indicate that the chance of recovering cultural resources from the Spanish, Mexican, or Early American periods is minimal. It is possible that later Gold Rush era and late Nineteenth Century cultural resources may lie buried below the ground surface of the site. The report concludes that, based on the body of archival documentation examined and assessed during the course of the present research, there is a potential for significant subsurface cultural resources to be adversely impacted by excavation and construction. Construction of the proposed project would require excavation of approximately 39,275 cubic yards of soil. Given the potential presence of archaeological resources on the site, a program of pre-construction archaeological testing and evaluation is recommended to determine the presence or absence of subsurface archaeological resources of significance, as identified in Mitigation Measure No. 4, pages 36 and 37.

Historic Architectural Resources

The proposed project could affect historic and architectural resources of significance on the project site or on adjacent properties. Buildings on and in the vicinity of the project site were surveyed between 1974 and 1976 as part of a City-sponsored citywide inventory of architecturally significant buildings. The inventory assessed the architectural significance of 10,000 surveyed structures from the standpoint of overall design and particular design features. Both contemporary and older buildings were included and each building was numerically rated according to its overall architectural significance. The ratings ranged from a low of "0" to a high of "5". Factors considered included architectural significance, urban design context, and overall environmental significance. No building on or adjacent to the proposed project site was listed in the 1976 Citywide Architectural Survey. Further, no building on the project site is listed on the National Register of Historic Places, or listed under Article 10 of the *City Planning Code* (which concerns sites such as designated City Landmarks and buildings within Historic Districts), or Article 11 of the *City Planning Code* (which involves rating buildings for their architectural significance). The proposed project would not have any significant impact on architectural or historical resources and this environmental area will not be discussed further in the EIR.

Yes No Discussed

C. OTHER

Require approval and/or permits from City Departments other than the Planning Department or Department of Building Inspection or from Regional, State or Federal Agencies?



The proposed project would require approval from the Department of Public Works for a lot split.

D. MITIGATION MEASURES PROPOSED AS PART OF THE PROJECT

	<u>Yes</u>	<u>No</u>	<u>N/A</u>	<u>Discussed</u>
1. Could the project have significant effect if mitigation measures are not included in the project?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2. Are all mitigation measures necessary to eliminate significant effects included in the project?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The following mitigation measures are related to topics determined to require no further analysis in the EIR. The EIR will contain a Mitigation Measures chapter which describes these measures and includes other measures which would or could be adopted to reduce potential adverse effects of the project identified in the EIR.

The project sponsor has agreed to implement the following mitigation measures:

Mitigation Measure 1

Construction Air Quality: The project sponsor shall require the construction contractor(s) to spray the project site with water during excavation, grading, and site preparation activities; spray unpaved construction areas with water at least twice per day; cover stockpiles of soil, sand, and other such material; cover trucks hauling debris, soils, sand or other such material; and sweep surrounding streets during these periods at least once per day to reduce particulate emissions. Ordinance 175-91, passed by the Board of Supervisors on May 6, 1991, requires that non-potable water be used for dust control activities. Therefore, the project sponsor shall require the construction contractor(s) to obtain reclaimed water from the Clean Water Program for this purpose.

The project sponsor shall require the project contractor(s) to maintain and operate construction equipment so as to minimize exhaust emissions of particulates and other pollutants, by such means as prohibiting idling motors when equipment is not in use or when trucks are waiting in queues, and implementing specific maintenance programs to reduce emissions for equipment that would be in frequent use for much of the construction period.

Mitigation Measure 2(a)

Hazards (Underground Storage Tanks): The project sponsor shall conduct an Underground Storage Tank (UST) scan by magnetometer to determine if abandoned USTs or piping exist on the site. If any are found, they shall be removed in accordance with regulatory requirements, and surrounding soils shall be tested. Any soil found to be contaminated at or above potentially hazardous levels shall be handled and disposed in accordance with Mitigation Measure No. 3, below.

Mitigation Measure 2(b)

Hazards (Contaminated Soil):

Step 1: Preparation of Site Mitigation Plan:

If, based on the results of the soil tests conducted, the San Francisco Department of Public Health (DPH) determines that the soils on the project site are contaminated with lead or other contaminants at or above potentially hazardous levels, the DPH shall determine if preparation of a Site Mitigation Plan (SMP) is warranted. If such a plan is requested by the DPH, the SMP shall include a discussion of the level of contamination of soils on the project site and mitigation measures for managing contaminated soils on the site, including, but not limited to: 1) the alternatives for managing contaminated soils on the site (e.g., encapsulation, partial or complete removal, treatment, recycling for reuse, or a combination); 2) the preferred alternative for managing contaminated soils on the site and a brief justification; and 3) the specific practices to be used to handle, haul, and dispose of contaminated soils on the site. The SMP shall be submitted to the DPH for review and approval. A copy of the SMP shall be submitted to the Planning Department to become part of the case file.

Step 2: Handling, Hauling, and Disposal of Contaminated Soils

- (a) specific work practices: If based on the results of the soil tests conducted, DPH determines that the soils on the project site are contaminated with lead or other contaminants at or above potentially hazardous levels, the construction contractor shall be alert for the presence of such soils during excavation and other construction activities on the site (detected through soil odor, color, and texture and results of on-site soil testing), and shall be prepared to handle, profile (i.e., characterize), and dispose of such soils appropriately (i.e., as dictated by local, state, and federal regulations, including OSHA lead-safe work practices) when such soils are encountered on the site.
- (b) dust suppression: Soils exposed during excavation for site preparation and project construction activities shall be kept moist throughout the time they are exposed, both during and after work hours.
- (c) surface water runoff control: Where soils are stockpiled, visqueen shall be used to create an impermeable liner, both beneath and on top of the soils, with a berm to contain any potential surface water runoff from the soil stockpiles during inclement weather.
- (d) soils replacement: If necessary, clean fill or other suitable material(s) shall be used to bring portions of the project site, where contaminated soils have been excavated and removed, up to construction grade.
- (e) hauling and disposal: Contaminated soils shall be hauled off the project site by waste hauling trucks appropriately certified with the State of California and adequately covered to prevent dispersion of the soils during transit, and shall be disposed of at a permitted hazardous waste disposal facility registered with the State of California.

Step 3: Preparation of Closure/Certification Report

After excavation and foundation construction activities are completed, the project sponsor shall prepare and submit a closure/certification report to DPH for review and approval. The closure/certification report shall

include the mitigation measures in the SMP for handling and removing contaminated soils from the project site, whether the construction contractor modified any of these mitigation measures, and how and why the construction contractor modified those mitigation measures.

Mitigation Measure 3

Cultural Resources:

The project sponsor shall retain the services of an archaeologist. During removal of structures, paving, and any buried foundation materials found on the site, the archaeologist shall carry out a pre-excavation testing program to better determine the probability of finding archaeological remains on the site. The testing program shall consist of a series of mechanical, exploratory borings or trenches and/or other testing methods determined to be appropriate by the archaeologist.

If, after testing, the archaeologist determines that no further investigations or precautions are necessary to safeguard potentially significant archaeological resources, the archaeologist shall submit a written report to the Environmental Review Officer (ERO), with a copy to the project sponsor. If the archaeologist determines that further investigations or precautions are necessary, he/she shall consult with the ERO, and they shall jointly determine what additional procedures are necessary to minimize potential effects on archaeological resources.

These additional mitigation measures shall be implemented by the project sponsor and might include a program of on-site monitoring of site excavation that may be necessary, during which the archaeologist shall record observations in a permanent log. Whether or not there are archaeological finds of significance, the archaeologist shall prepare a written report on the monitoring program that shall be submitted first and directly to the ERO, with a copy to the project sponsor. During the monitoring program, the project sponsor shall designate one individual on site as his/her representative. This representative shall have the authority to suspend work at the site to give the archaeologist time to investigate and evaluate archaeological resources should they be encountered.

Should evidence of archaeological resources of potential significance be found during the monitoring program, the archaeologist shall immediately notify the Environmental Review Officer (ERO); and the project sponsor shall halt any activities which the archaeologist and the ERO jointly determine could damage such archaeological resources. Ground disturbing activities that might damage cultural resources would be suspended for a total maximum of four weeks over the course of construction.

After notifying the ERO, the archaeologist shall prepare a written report to be submitted first and directly to the ERO, with a copy to the project sponsor, which shall contain an assessment of the potential significance of the archaeological finds and recommendations for what measures should be implemented to minimize potential effects on archaeological resources. Based on this report, the ERO shall recommend specific mitigation measures to be implemented by the project sponsor. These additional mitigation measures might include a site security program, additional on-site investigations by the archaeologist, and/or documentation, preservation, and recovery of the cultural material.

Finally, the archaeologist shall prepare a report documenting the cultural resources that were discovered, an evaluation as to their significance, and a description as to how any archaeological testing, exploration and/or recovery program was conducted.

Copies of all draft reports prepared according to this mitigation measure would be sent first and directly to the ERO for review. Following approval by the ERO, copies of the final report would be sent to the President of the Landmarks Preservation Advisory Board and the California Archaeological Site Survey, Northwest Information Center. The Office of Major Environmental Analysis shall receive three copies of the final archaeological report, accompanied by copies of transmittals documenting its distribution to the President of the Landmarks Preservation Advisory Board and the California Archaeological Site Survey, Northwest Information Center.

E. ALTERNATIVES

Alternatives to the proposed project will be defined further and described in the EIR. At a minimum, the alternatives analyzed in the EIR will include the following:

1. A No Project Alternative, in which the project site would remain in its existing parking condition.
2. A Code-Compliant Alternative, in which the proposed uses would be at a lower level of intensity that would comply with existing zoning, height, bulk, and FAR restrictions.
3. A Hotel-Only Alternative, in which the proposed project would consist solely of hotel uses, with no residential uses.

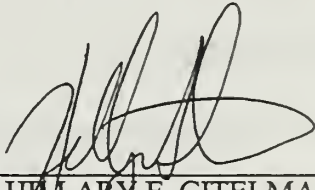
F. MANDATORY FINDINGS OF SIGNIFICANCE

	<u>Yes</u>	<u>No</u>	<u>Discussed</u>
1. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or pre-history?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. Does the project have possible environmental effects which are individually limited, but cumulatively considerable? (Analyze in the light of past projects, other current projects, and probable future projects.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Would the project cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

G. ON THE BASIS OF THIS INITIAL STUDY

- ☐ I find the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared by the Department of City Planning.
- ☐ I find that although the proposed project could have a significant effect on the environment, there WILL NOT be a significant effect in this case because the mitigation measures in the discussion have been included as part of the proposed project. A NEGATIVE DECLARATION will be prepared.
- ☒ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

Date: 1/20/01



HILLARY E. GITEMAN
Environmental Review Officer
for
Gerald G. Green
Director of Planning

Appendix B

Wind Tunnel Study

TECHNICAL MEMORANDUM

TO: Paul Maltzer
Acting Environmental Review Officer
Planning Department, Major Environmental Analysis Group
30 Van Ness Avenue, Suite 4150
San Francisco, CA 94102

FROM: Charles Bennett
Environmental Science Associates
225 Bush Street, Suite 1700
San Francisco, CA 94104

DATE: April 17, 2001

SUBJECT: Potential Wind Conditions
Proposed 888 Howard Street Project
San Francisco, California
ESA 201198

I. INTRODUCTION AND OVERVIEW

A wind-tunnel test was performed for the proposed high-rise hotel and residence building at 888 Howard Street, located on the block bounded by Howard, Fifth, Minna and Fourth Streets, in the City of San Francisco. The test was performed in order to define the pedestrian wind environment that would exist around the proposed project. Pedestrian-level wind speeds were measured at selected points for the site as it presently exists and for the proposed project in the existing setting, to quantify resulting pedestrian-level winds in public spaces near the proposed project.

Details of the background and test methods are presented in Section II, Background. Test results and discussion are presented in Section III, Study Results, and Section IV summarizes the findings and conclusions. An overview of the test results and conclusions follows.

Test 1: Existing Setting

The existing setting consists of all existing buildings, with the Moscone Expansion project (under construction) and the approved Bloomingdales project on Mission Street.

The existing conditions are considered moderately windy; the average wind speed for all 29 test points is less than 11 mph. Wind speeds of 14 mph or more occur at 3 of the 29 locations. Twenty of the 29 locations meet the Planning Code's pedestrian-comfort criterion value of 11-mph. The highest wind speeds in the vicinity (14 mph) occur at 2 locations on the east sidewalk of Fifth Street, at a location on the west¹ boundary of the project and at the southeast corner of Fifth and Mission Streets, as well as at a point atop the east end of the Fifth and Mission Garage.

The Code's wind hazard criterion is currently not exceeded at any of the 29 tested locations in the site vicinity.

¹ Directions used here refer to local north - south, which aligns with Fifth Street, and local east-west, which aligns with Howard Street. However, all wind directions stated are true compass directions.

Test 2: Project in the Existing Setting

The project scenario consists of the 888 Howard Street project added to the existing setting buildings.

With the project, wind conditions would be considered moderately windy; the average wind speed for all 29 test points would increase by nearly 3/4 mph, to just over 11 mph. Wind speeds in pedestrian areas would range from 7 mph to 20 mph. Wind speeds of 14 mph or more would occur at 7 locations and a wind speed of 18 mph or more would occur at one location. Seventeen of the 29 locations would meet the Planning Code's pedestrian-comfort criterion value of 11-mph. The project would eliminate 4 existing exceedances and add 7 new exceedances, while 5 of the existing exceedances would continue.

With the project, as compared to existing conditions, wind speeds would increase at 11 locations, remain unchanged at 6 locations and decrease at 12 locations. The highest wind speeds in the vicinity (17 and 20 mph) would occur across Howard Street from the project site and at the southwest corner of the project site, at the intersection of Fifth and Howard Streets.

With the project and its landscape trees along the Fifth Street and Howard Street frontages, the Code's wind hazard criterion would not be exceeded at any of the locations tested.

Project Mitigation Measures

Without the proposed street tree landscaping, the project alone would create one new hazard criterion exceedance at the southwest corner of the site, at the intersection of Fifth and Howard Streets. The duration of the exceedance would be 1 hour. The presences of the landscape trees along the Fifth Street and Howard Street frontages of the project would be sufficient to eliminate this wind hazard criterion exceedance².

Seven new pedestrian-comfort criterion exceedances would be caused by the project -- at two points on Howard Street fronting the site, at one point across Howard Street, at the four corners of the intersection of Fifth and Howard, and at a point on the west side of Fifth Street, at Minna Street. Four existing exceedance would be eliminated by the project.

Given the existing wind conditions of the site and vicinity and the changes in wind conditions that can reasonably be expected from a structure the size of the project, it may not be possible to design any structure that fully meets the goals of the project and that fully reduces ambient wind speeds to meet Section 148 comfort criteria at all locations.

² Prior wind-tunnel tests for other developments in the vicinity have clearly shown that the placement of mature street trees at spacings of 40 to 50 feet, can fully mitigate a localized 1-hour wind hazard exceedance.

II. BACKGROUND

Tall buildings and structures can strongly affect the wind environment for pedestrians. In cities, groups of structures tend to slow the winds near ground level, due to the friction and drag of the structures themselves. Buildings that are much taller than the surrounding buildings intercept and redirect winds that might otherwise flow overhead, and bring them down the vertical faces of the building to ground level, where they create ground-level wind and turbulence. These redirected winds can be relatively strong and also relatively turbulent, and can be incompatible with the intended uses of nearby ground-level spaces.

The area generally upwind of the project includes many low and mid-rise buildings, but the only other high-rise building nearby will be the Bloomingdales tower. The general openness of the upwind areas allows strong winds to reach the site. Because the structure is in a windy area and because it presents a relatively tall, although not wide, upper structure that can intercept the existing strong west-northwest, west and west-southwest winds, it is possible that the building could contribute to ground-level winds that may prove to be hazardous to pedestrians in the vicinity. Wind-tunnel testing is necessary to determine whether or not unsuitably strong winds would be present after the project is built.

Existing Climate and Wind Conditions

Average winds speeds in San Francisco are the highest in the summer and lowest in winter. However, the strongest peak winds occur in winter. The highest average wind speeds occur in mid-afternoon and the lowest in the early morning. Westerly to northwesterly winds are the most frequent and strongest winds during all seasons. Of the 16 primary wind directions, four have the greatest frequency of occurrence as well as they make up the majority of the strong winds that occur; these are northwest, west-northwest, west and west-southwest winds.

Data describing the speed, direction, and frequency of occurrence of winds were gathered at the old San Francisco Federal Building at 50 United Nations Plaza (at a height of 132 ft.) during the six-year period, 1945 to 1950. Measurements taken hourly and averaged over one-minute periods have been tabulated for each month (averaged over the six years) in three-hour periods using seven classes of wind speed and 16 compass directions. Analysis of these data shows that during the hours from 6:00 a.m. to 8:00 p.m., about 70% of all winds blow from five of the 16 directions, as follows: Northwest (NW), 10%; West Northwest (WNW), 14%; West (W), 35%; West Southwest (WSW), 2%; Southwest (SW), 9%; and all other winds, 28%. Calm conditions occur 2% of the time. More than 90% of measured winds over 13 mph blow from the NW, WNW, W, WSW, or SW.

Wind Speed and Pedestrian Comfort³

The comfort of pedestrians varies under different conditions of sun exposure, temperature, clothing, and wind speed. Winds up to four miles per hour (mph) have no noticeable effect on pedestrian comfort. With winds from four to eight mph, wind is felt on the face. Winds from eight to thirteen mph will disturb hair, cause clothing to flap, and extend a light flag mounted on a pole. Winds from 13 to 19 mph will raise loose paper, dust and dry soil, and will disarrange hair. For winds from 19 to 26 mph, the force of the wind will be felt on the body. With 26 to 34 mph winds, umbrellas are used with difficulty, hair is blown straight, there is

³ Lawson, T.V. and A.D. Penwarden, "The Effects of Wind on People in the Vicinity of Buildings," Proceedings of the Fourth International Conference on Wind Effects on Buildings and Structures, London, 1975, Cambridge University Press, Cambridge, U.K., 605-622 1976.

difficulty in walking steadily, and wind noise is unpleasant. Winds over 34 mph increase difficulty with balance and gusts can blow people over.

City Planning Code Requirements

This project is located in an area that is subject to the City Planning Code Section 148, Reduction of Ground-Level Wind Currents in C-3 (Downtown Commercial) Districts. However, this analysis is performed using the same wind testing, analysis and evaluation methods that would be used to determine conformity with Section 148 of the Code.

City Planning Code Section 148, Reduction of Ground-Level Wind Currents in C-3 (Downtown Commercial) Districts, requires buildings to be shaped so as not to cause ground-level wind currents to exceed, more than 10% of the time, 11 mph in substantial pedestrian use areas, and 7 mph in public seating areas. Similarly, the Code requires that buildings not cause equivalent wind speeds to reach or exceed the hazard level of 26 mph as averaged for a single full hour of the year, or 0.011416% of the time. These comfort criteria are based on wind speeds that are measured for one minute and averaged. In contrast, the hazard criterion is based on winds that are measured for one hour and averaged; when stated on the same basis as the comfort criteria winds, the hazard criterion speed is a one-minute average of 36 mph⁴. The wind ordinance is defined in terms of equivalent wind speed.⁵ This term denotes an average wind speed (mean velocity), adjusted to include the level of gustiness and turbulence.

Model and Wind Testing Protocols

A 1 inch to 50 foot scale model of the project was constructed in order to simulate the project within its existing and future contexts. The scale model of the project and surrounding area was provided by ESA. The project design used was from plans provided by the project architects - Patri Mercker Architects. The test model was constructed by ESA. The scale models were then tested in a boundary layer wind-tunnel facility at the University of California, Davis, under the direction of Dr. Bruce White. These wind-tunnel tests, however, were performed independent of the University.

The wind-tunnel tests were conducted for two configurations: 1) the Existing Setting and 2) the Project in the Existing Setting. In accordance with the protocol for wind-tunnel testing in Section 148 of the Planning Code, each configuration was wind-tunnel tested for each of four primary wind directions: northwest (NW), west-northwest (WNW), west (W) and west-southwest (WSW). Also, according to the test protocol, project landscaping was excluded from the test model; this is conservative and usually overstates pedestrian wind speeds.

The test procedure consisted of orienting the selected configuration of the model in the boundary layer wind-tunnel and measuring the wind speed at each of the test locations with a hot-wire anemometer. The model was tested in a wind tunnel that allows testing of natural atmospheric boundary layer flow past surface objects such as buildings and other structures. The tunnel has an overall length of 22 meters (m) (72 feet), a test section of 1.22 m (4 feet) wide by 1.83 m (6 feet) high, and an adjustable false ceiling. The adjustable ceiling and turbulence generators allow speeds within the tunnel to vary from 1 meter per second (m/s) to 8 m/s, or 2.2 mph to 17.9 mph.

⁴ Arens, E., "Designing for Acceptable Wind Environment," Transactions Engineering Journal, ASCE 107, No. TE 2, p. 127-141, 1981.

⁵ Equivalent mean wind speed is defined as the mean wind, multiplied by the quantity (one plus three times the turbulence intensity) divided by 1.45.

Wind-speed measurements at each test location were made with a hot-wire anemometer, an instrument that directly relates rates of heat transfer to wind speeds by electronic signals. The hot-wire signals are proportional to the magnitude and steadiness of the wind. The hot-wire probe is calibrated to an accuracy of within 2% before the test procedure is begun. The hot-wire probe measures the analog voltage for approximately 30 seconds at each test location. When converted to digital signals, this measurement provides approximately 30,000 individual voltage samples that are averaged and the root mean square calculated for each test location. These data, when converted to velocity using the calibration curves, provide the mean velocity and turbulence values used to calculate the equivalent wind speed.

By measuring both the mean wind speeds and corresponding turbulence intensities, high wind speeds and gustiness (changes in wind speeds over short periods of time) could be determined. The ratio of near-surface speed to reference wind speed was calculated from the hot-wire measurements. The inherent uncertainty of measurements made with the hot-wire anemometer close to the surface of the model is $\pm 5\%$ of the true values.

These values are compared with the free stream wind as measured in the wind-tunnel. As a result, each wind-tunnel measurement results in a ratio that relates the speed of ground-level wind to the speed at the reference elevation, in this case the height of the Old San Francisco Federal Building. These ratios are the output data from the wind-tunnel tests.

These output data are reduced using a computer program that evaluates the contribution from each tested wind direction to the total wind speed measured at each location for each wind direction. The program first adjusts the wind-tunnel output ratios to account for the differences between the boundary layer profile in the wind-tunnel and the profile as measured at the Old Federal Building located at 50 United Nations Plaza. The program then computes the equivalent wind speed that conforms to the selected criterion, either the wind speed exceeded 10% of the time or the wind speed exceeded one hour or more per year. The program also computes the percentage of time that the wind would exceed the speed criterion selected, and further computes the percentage contribution of each wind direction to the equivalent wind speed and to the excess of the criterion. In addition to the computations for each tested wind direction, the program computes an average ratio and uses this to compute statistics for "Other" winds, which accounts for all remaining wind directions.

The output of the computer program is presented in the Wind-Tunnel Test Results tables for normal winds and for hazardous winds. These tables, appended to this Memorandum, provide the detail of the data and of the intermediate results that are described above.

The wind tunnel ratios were included in the program input, and the results evaluated in the discussions that follow.

Wind Speed Profile Adjustments

The standard Section 148 wind test methodology implicitly assumes that the relationship between height above the ground and wind speed (referred to hereafter as the wind speed profile) is the same in the test area as at the Civic Center weather station. However, wind speed profiles vary from place to place in San Francisco, and the wind speed profiles for the project site differ from those at the Civic Center weather station where data were gathered.

Previous wind-tunnel tests measured the wind speed profiles for NW, WNW, W and WSW winds in the China Basin area. Wind profile adjustment factors were estimated for those wind

directions, based on those profile measurements and upon the methodology presented in the American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE) Handbook, Chapter 14. Based on data from the site's wind speed profiles and previously measured profiles for the Civic Center, the ASHRAE methodology was expanded to create two new categories intermediate to the four presented in Chapter 14. Those categories were assigned for each of the four wind directions at the Old Federal Building meteorological station and for each of the four wind directions at the project site. The assignment provided the values used for alpha and delta, the power-law exponent and the boundary-layer thickness respectively, and ultimately the factors for normalizing that Civic Center meteorological data to the wind speed at the project site. For China Basin sites, WSW wind speeds are reduced by about 27% and W wind speeds by 13%, while NW and WNW wind speeds are reduced by about 3% compared to winds in the Civic Center. The wind speeds reported below, in Section III. Test Cases and Study Results, reflect the use of these adjusted values.

III. TEST CASES AND STUDY RESULTS

Introduction

Twenty-nine test locations were studied for each of the two test scenarios for the four prevailing wind directions: northwest, west-northwest, west, and southwest, that are the most common in San Francisco, and are therefore the most representative for evaluation of the proposed Project.

In general, the test locations focus on locations around the project, and on the sidewalks of Howard, Fifth, Minna and Fourth Streets (see Figure 1).

A total of six points are located immediately adjacent to the project structure, on the sidewalks of Howard Street (#6, 12-14) and Fifth Street (#17), and one (#11) at ground level between the project and the Moscone Expansion project.

Along Howard Street are 16 locations (#1-10, 12-16, 29), with 9 points on the north side (#2, 4, 6, 7, 9, 12-14, 16) and 7 points on the south side of the street (#1, 3, 5, 8, 10, 15, 29).

Twelve points (#5, 6, 15-19, 21-25) are located on Fifth Street between Mission and Howard (or Folsom) Streets, with 6 points (#6, 5, 17, 21, 24, 25) on the east side and 6 points (#15, 16, 18, 19, 22, 23) on the west.

Four points are on Mission Street, at the intersection of Fifth (#22-25).

Five points (#1, 2, 26, 27, 29) are on Fourth Street sidewalks, between Minna and Howard.

Six points (#18-21, 26, 27) are located along Minna Street from Fifth Street to Fourth Street. One point (#19) is on the north side of the street and 5 points (#18, 20, 21, 26, 27) are on the south side of Minna.

One point (#28) was placed atop the east end of the Fifth and Mission Garage.

A total of four points are on the decks of the low-rise portion of the project (#A, B, C, D). Measurements made at those locations were for the use in design of those areas. Since these points are not in public pedestrian areas, their wind speeds are not discussed here.

Note that these groupings, as well as others used in the discussions of existing conditions and project conditions, include some individual locations in more than one group for discussion purposes.

All hot-wire measurements were taken at the same series of surface points around the project site for all test configurations and wind directions.

For the purpose of identifying the applicable wind comfort criterion of the Code, all of the existing test locations are considered to be pedestrian, rather than sitting areas.

Wind Evaluation and Criteria

Just as the wind-tunnel testing was performed in accordance with the test protocols of City Planning Code Section 148, the performance requirements of Code Section 148 were used to evaluate the results of the tests. The mean wind speeds are compared to the Code's comfort criteria of 11 mph for areas of substantial pedestrian use and 7 mph for seating areas, each not to be exceeded more than 10% of the time. Separate calculations evaluate compliance with the hazard criterion. As previously noted, the wind data observed at the Old San Francisco Federal Building are not full hour average speeds as identified by the Code, so it is necessary to adjust the wind criterion speed to obtain a valid comparison with the available data and the equivalent wind speeds based on those data. When normalized to the equivalent wind speeds used here, the hazard criterion speed is equal to 36 mph, the value used in the tables.

Throughout the following discussion the wind speeds reported refer to the equivalent wind speeds that would be exceeded 10% of the time when referring to the comfort criteria, and about 0.011416% of the time when referring to the hazard criterion.

Test Output

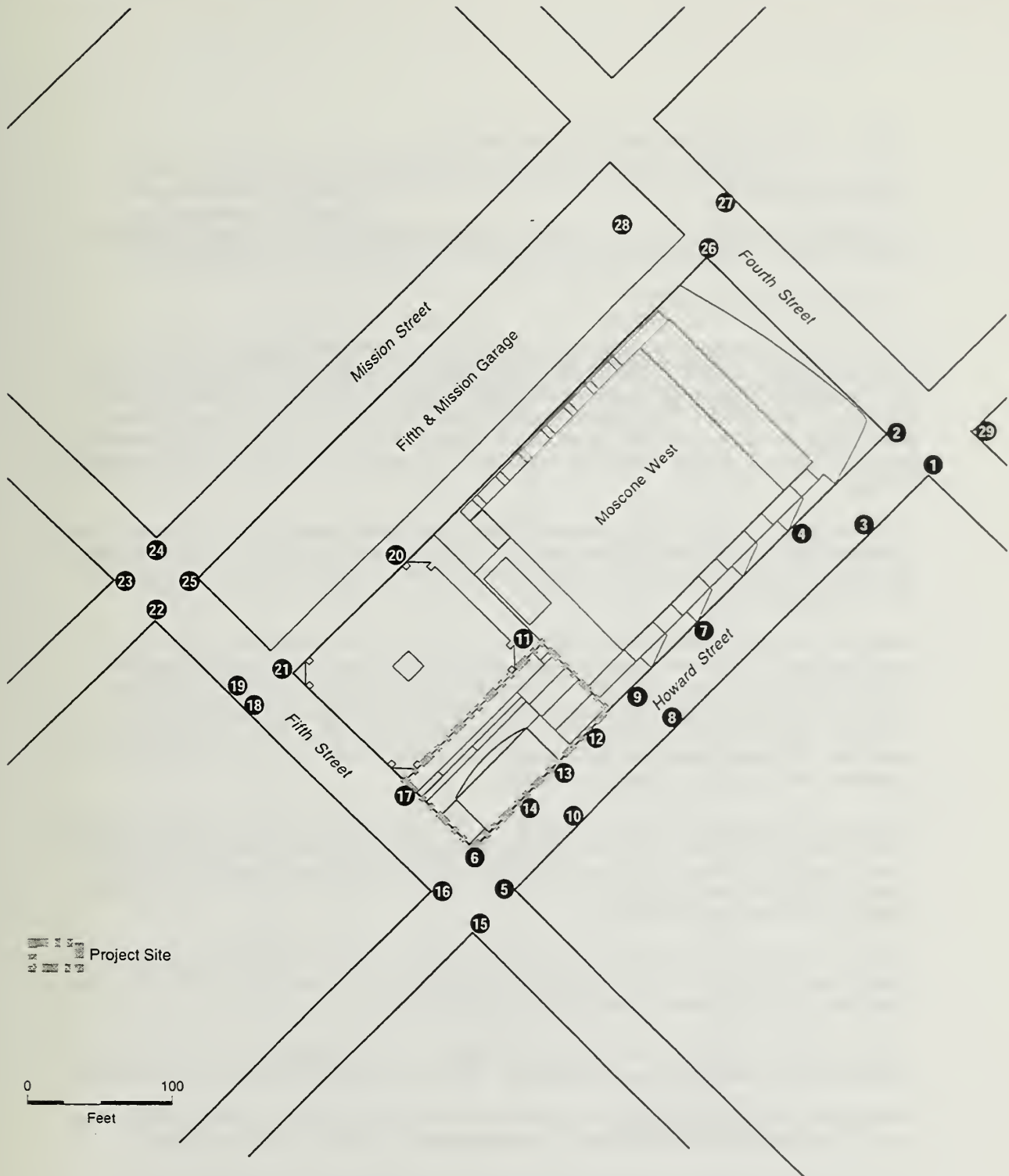
The basic wind-tunnel test data and the detailed outputs of the computer program are presented in tables of comfort criteria and hazard criteria evaluations for each of the scenarios, Setting and Project. These output tables, appended to this Memorandum, provide the detail of the data and the intermediate results described above. The wind-tunnel ratios and the wind profile adjustment factors for each wind direction are included. The results are evaluated in the discussions that follow.

Figure 1 identifies the measurement point locations. Summary information about the wind-tunnel test results and evaluations of compliance with the comfort and hazard criteria are presented for the existing Setting and the Project scenarios in summary tables. The Comfort Analyses results, namely the measured 10% exceeded speed and the percentage of time that the comfort criterion is exceeded for each test location and test scenario, are presented in the one table. The next table presents the Wind Hazard Analyses results, the equivalent wind speed and the number of hours per year of exceedance, if any, of the hazard criterion for each test location and test scenario.

Throughout the following discussion, references are made to values from these two tables. Note that the times in hours and wind speeds in mph presented in those tables are rounded to the nearest integer value. The sums, differences and averages presented also are rounded after calculations that are made using the actual (unrounded) values. As a result, what may appear to be discrepancies in the tabular results are simply due to the rounding of results.

Discussion

Throughout the following discussion the wind speeds reported refer to the equivalent wind speeds that would be exceeded 10% of the time when referring to the Pedestrian Criterion, and winds exceeded 1 hour per year when referring to the Hazard Criterion.



SOURCE: Environmental Science Associates

888 Howard Street © 2011/19 ■
Figure B-1
 Wind Test Point Locations

TEST 1 - THE EXISTING WIND ENVIRONMENT

The Existing Setting

The existing setting consists of all existing buildings together with the Moscone Expansion project (under construction) and the approved Bloomindaes project on Mission Street.

Comfort Criterion Conditions

The existing wind conditions are moderately windy; the average wind speed for all 29 test points is less than 11 mph. Wind speeds of 14 mph or more occur at 3 locations. Twenty of the 29 locations (#) meet the Planning Code's pedestrian-comfort criterion value of 11-mph. See Figure 1 and Table 1. The highest wind speeds in the vicinity (14 mph) occur at two points along the east side of Fifth Street, one at the project site (#17) and one at the southeast corner of Fifth and Mission Streets (#24), as well as at a point (#28) atop the Fifth and Mission Garage. .

At the six points (#6, 11-14, 17) on the site block, wind speeds range from 9 to 14 mph. Wind speeds are lowest at the Minna Street access alley (#11). Four (#6, 11, 13, 14) of the six meet the pedestrian comfort criterion. The highest wind speed, 17 mph, occurs at the northwest corner of the site (#17)

Along Howard Street, wind speeds range from 7 to 13 mph, with wind speeds regularly increasing from a 7 mph to 10 mph at three points (#1, 2, 29) at Fourth Street to speeds of 12 mph to 13 mph at three points (#8, 9, 12) mid-block, near the west end of the Moscone West building and one point (#15) on the southwest corner of Fifth and Howard Street. Except at the intersections, wind speeds are generally the same as or up to 3 mph higher on the south side of Howard Street than on the north. Twelve (#1-7, 10, 13, 14, 16, 29) of the 16 locations meet the pedestrian comfort criterion.

Wind speeds range from 9 mph to 14 mph at the 12 points (#5, 6, 15-19, 21-25) on Fifth Street between Mission and Howard Streets. At four points at the MS interstecion (#22-25), wind speeds range from 10 mph to 14 mph, while wind speeds range from 10 mph to 12 mph at 4 points at the HS intersection (#5, 6, 15, 16). Seven (#5, 6, 16, 18, 19, 21, 23) of the 12 points meet the pedestrian comfort criterion.

Wind speeds range from 13 mph to 14 mph at three (#22, 24, 25) of the 4 points on MS, at its intersection with Fifth (#22-25), while the wind speed at the northwest corner (#23) is 10 mph. Only one point (#23) meets the pedestrian comfort criterion.

Existing wind speeds range from 7 mph to 10 mph at the 5 points (#1, 2, 26, 27, 29) on Fourth Street sidewalks, between Minna and Howard. All five meet the pedestrian comfort criterion.

Wind speeds range from 9 mph to 10 mph at the 6 points (#18-21, 26, 27) along Minna Street between Fifth Street and Fourth Street. All six meet the pedestrian comfort criterion.

The existing wind speed is 14 mph at one point (#28) atop the east end of the Fifth and Mission Garage. The wind speed there exceeds the pedestrian comfort criterion.

Hazard Conditions

The wind hazard criterion is not exceeded at any of the existing locations. See Table 2.

**Table 1 - Wind Comfort Analysis - Existing and Project Conditions⁶
Proposed 888 Howard Street Project⁷
San Francisco, California
Wind-Tunnel Test, April, 2001**

References		Existing			Project		
Location Number	Comfort Criterion Speed (mph)	Equivalent Wind Speed (mph) Exceeded 10% of Time	Percent of Time Wind Speed Exceeds Criterion	Exceeds	Equivalent Wind Speed (mph) Exceeded 10% of Time	Percent of Time Wind Speed Exceeds Criterion	Speed Change Relative to Existing (mph)
1	11	8	1		7	1	-1
2	11	7	0		7	1	
3	11	10	4		10	7	
4	11	8	1		9	6	1
5	11	10	6		15	24	5
6	11	11	9		20	42	9
7	11	9	2		8	2	-1
8	11	12	12	e	11	11	-
9	11	13	17	e	9	3	-5
10	11	11	9		17	33	6
11	11	9	4		9	3	
12	11	12	13	e	11	10	-1
13	11	11	11		13	17	2
14	11	11	11		15	21	3
15	11	12	12	e	14	19	2
16	11	9	4		14	19	5
17	11	14	22	e	11	11	-3
18	11	10	8		12	14	2
19	11	9	6		9	5	
20	11	10	6		9	3	-1
21	11	9	4		11	10	2
22	11	13	19	e	12	12	-2
23	11	10	8		10	7	-1
24	11	14	21	e	13	17	-1
25	11	13	17	e	12	13	-1
26	11	10	6		11	12	1
27	11	9	5		8	3	-1
28	11	14	20	e	14	19	
29	11	10	8		9	6	-1
Average mph / %		10.6	9%		11.3	12%	0.7
Exceedances:		Total	9		Total	12	
Counts:		Existing	9	e	Existing Exceedance	5	e
					New, Due to Project	7	+
					New, at new Location	0	#
					Exceedance Eliminated	4	-

⁶ Wind speeds and durations are rounded, so column totals and row differences may not add. See Section II, Test Output.

⁷ Test models did not include proposed project landscape trees, which would reduce the wind speeds measured at locations #6, 12, 13, 14, and 17 by 1 mph to 2 mph. See the discussion.

Table 2 - Wind Hazard Analysis - Existing and Project Conditions⁸
Proposed 888 Howard Street Project⁹
San Francisco, California
Wind-Tunnel Test, April 2001

References		Existing			Project			
Location Number	Wind Hazard Criterion Speed (mph)	Equivalent Wind Speed (mph) Exceeded 1 hour/year	Hours per year Wind Speed Exceeds Hazard Criterion	Exceeds Hazard Criterion	Equivalent Wind Speed (mph) Exceeded 1 hour/year	Hours per year Wind Speed Exceeds Hazard Criterion	Hours Change Relative to Setting	Exceeds Hazard Criterion
1	36	16			16			
2	36	14			15			
3	36	18			21			
4	36	15			21			
5	36	17			27			
6	36	22			36	1	1	+
7	36	18			19			
8	36	24			22			
9	36	27			23			
10	36	20			32			
11	36	17			15			
12	36	21			25			
13	36	20			26			
14	36	19			28			
15	36	21			29			
16	36	18			31			
17	36	28			22			
18	36	22			21			
19	36	20			20			
20	36	17			20			
21	36	16			19			
22	36	26			22			
23	36	22			23			
24	36	29			28			
25	36	27			27			
26	36	17			20			
27	36	19			17			
28	36	33			31			
29	36	22			24			
Average mph / hr		20.9	0		23.4	1	1.0	
Exceedances:		Total	0		Total	1		
Counts:		Existing	0	e	Existing Exceedance	0		e
					New, Due to Project	1		+
					New, at new Location	0		#
					Exceedance Eliminated	0		-

⁸ Wind speeds and durations are rounded, so column totals and row differences may not add. See Section II, Test Output.

⁹ Test models did not include proposed project landscape trees, which would eliminate the hazard exceedance at location #6 and reduce the wind speeds measured at locations #6, 12, 13, 14, and 17 by 1 mph to 2 mph.

TEST 2 - PROJECT WIND IMPACTS

Project in the Existing Setting

The project setting consists of the 888 Howard Street project model, developed from plans provided by the project architects, Patri Mercker Architects, and added to the existing setting for the test.

Comfort Criterion Conditions

With the project, wind conditions would be considered moderately windy; the average wind speed for all 18 test points would increase by nearly 3/4 mph, to just over 11 mph. Wind speeds in pedestrian areas would range from 7 mph to 20 mph. Wind speeds of 14 mph or more would occur at 7 locations (#5, 6, 10, 15, 16, 28) and a wind speed of 18 mph or more would occur at one location (#6). Seventeen of the 29 locations would meet the Planning Code's pedestrian-comfort criterion value of 11-mph. The project would eliminate 4 existing exceedances (#8, 9, 12, 17) and add 7 new exceedances (#5, 6, 10, 13, 14, 16, 18), while 5 of the existing exceedances (#15, 22, 24, 25, 28) would continue.

With the project, as compared to existing conditions, wind speeds would increase at 11 locations (#4-6, 10, 13-16, 18, 21, 26), remain unchanged at 6 locations (#2, 3, 8, 11, 19, 28) and decrease at 12 locations (#1, 7, 9, 12, 17, 20, 22-25, 27, 29). The highest wind speeds in the vicinity (17 and 20 mph) would occur across Howard Street from the project site (#10) and at the southwest corner of the project site (#6), at the intersection of Fifth and Howard Streets. Seventeen of the 29 locations (#1-4, 7-9, 11, 12, 17, 19, 20, 21, 23, 26, 27, 29), three fewer than under the existing conditions, would meet the Planning Code's pedestrian-comfort criterion value of 11-mph. See Figure 1 and Table 1.

At the six points (#6, 11-14, 17) on the site block, wind speeds would range from 9 to 20 mph. Wind speeds would be lowest at the Minna Street access alley (#11) and in front of the garage entrances. mid-block on Fifth (#17) and on Howard Streets (#12). Three (#11, 12, 17) would meet the pedestrian comfort criterion. The highest wind speed, 20 mph, would occur at the southwest corner of the site (#6)

Along Howard Street, wind speeds with the project would range from 7 to 20 mph, with wind speeds of 7 mph to 9 mph at three points (#1, 2, 29) at Fourth Street regularly increasing to speeds of 14 mph to 20 mph at four points (#5, 6, 15, 16) at Fifth Street. Except at the intersections, wind speeds generally would be 1 mph to 3 mph higher on the south side of Howard Street than on the north. Five locations (#2, 4, 7, 9, 12) on the north side of HS and four locations (#1, 3, 8, 29) on the south side of HS would meet the pedestrian comfort criterion.

Wind speeds would range from 9 mph to 20 mph at the 12 points (#5, 6, 15-19, 21-25) on Fifth Street between Mission and Howard Streets. At the four points at the MS intersection (#22-25), wind speeds would decrease by as much as 2 mph to range from 10 mph to 13 mph. In contrast, wind speeds would increase by 2 mph to 9 mph to reach 14 mph to 20 mph at 4 points at the HS intersection (#5, 6, 15, 16). Four (#17, 19, 21, 23) of the 12 points would meet the pedestrian comfort criterion.

With the project, wind speeds generally would decrease to range from 10 mph to 13 mph at the 4 points (#22-24) on MS, at its intersection with Fifth, while the wind speed at the northwest corner (#23) would remain at 10 mph. Only one point (#23) would meet the pedestrian comfort criterion.

With the project, changes of ± 1 mph would occur and wind speeds would range from 7 mph to 11 mph at the 5 points (#1, 2, 26, 27, 29) on Fourth Street sidewalks, between Minna and Howard. All five would continue to meet the pedestrian comfort criterion.

With the project changes ranging from -1 mph to +2 mph would occur, and wind speeds would range from 8 mph to 12 mph at the 6 points (#18-21, 26, 27) along Minna Street between Fifth Street and Fourth Street. Of the six, all but one (#18) would continue to meet the pedestrian comfort criterion.

With the project, the wind speed at one point (#28) atop the east end of the Fifth and Mission Garage would remain unchanged at 14 mph and exceed the pedestrian comfort criterion.

Hazard Conditions

Without the presence of the proposed street tree landscaping, but with the project, the wind hazard criterion of the Code would be exceeded at the southwest corner of the project site, on the sidewalk at the intersection of Fifth and Howard Streets, for a duration of 1 hour per year. With the proposed landscape trees, the hazard criterion would not be exceeded¹⁰.

Project Wind Mitigation Measures

Discussion

Under Section 148 of the City Planning Code, new buildings and additions to buildings may not cause ground-level winds to exceed the wind comfort criteria values more than ten percent of the time year round between 7:00 a.m. and 6:00 p.m. If existing wind speeds exceed the comfort level, new buildings and additions must be designed to reduce ambient wind speeds to meet the requirements. Section 148 also establishes a hazard criterion, which is a 26 mph hourly-average equivalent wind speed for a single full hour. Buildings may not cause winds that meet or exceed this criterion.

Siting of large structures is expected to change wind flows, speeding up the wind at some locations and slowing it elsewhere in the vicinity. Experience indicates that it is common for buildings to eliminate some existing exceedances and create others. In practice it is not always possible to mitigate remaining exceedances (as required by the Planning Code).

In this case, 9 pedestrian-comfort criterion exceedances occur under the Existing Setting. The project would eliminate 4 existing pedestrian-comfort criterion exceedances and create 7 new pedestrian-comfort criterion exceedances, for a new total of 12 exceedances. The project, without the landscaping street trees, would create a new hazard criterion exceedance.

Mitigation Measures

The addition of large street trees as proposed along the sidewalks of Fifth and Howard Streets in front of the project would reduce wind speeds by 1 to 2 mph at the 5 points along those two frontages (#6, 12-14, 17). This would not be sufficient to eliminate the 2 new exceedances of the pedestrian-comfort criterion that would occur at points #6 and 14, however it should be sufficient to eliminate the new pedestrian-comfort criterion exceedance at point #13. Further, with the proposed landscaping trees along the sidewalks, no new hazard criterion exceedance would be caused by the project.

¹⁰ Prior wind-tunnel tests for other developments in the vicinity have clearly shown that the placement of mature street trees at spacings of 40 to 50 feet, can fully mitigate a localized 1-hour wind hazard exceedance.

IV. SUMMARY

General Conditions and Comfort Criteria

The existing wind conditions are considered windy; the average wind speed for all 29 test points is slightly less than 11 mph. Wind speeds of 14 mph or more occur at 4 locations. Twenty of the 29 locations presently meet the Planning Code's pedestrian-comfort criterion value of 11-mph. The highest wind speeds in the vicinity (14 mph) occur at two points along the east side of Fifth Street, one at the project site and one at the southeast corner of Fifth and Mission Streets, as well as at a point atop the Fifth and Mission Garage.

With the project, as compared to existing conditions, wind speeds would increase at 11 locations, remain unchanged at 6 locations and decrease at 12 locations. The average wind speed for all 29 test points would increase, but would remain just above 11 mph.

With the project, wind speeds in pedestrian areas would range from 7 mph to 20 mph. Wind speeds of 14 mph or more would occur at 7 locations. The highest wind speeds in the vicinity (17 and 20 mph) would occur across Howard Street from the project site and at the southwest corner of the project site, at the intersection of Fifth and Howard Streets.

Seventeen of the 29 locations, three fewer than under existing conditions, would meet the Planning Code's pedestrian-comfort criterion value of 11-mph. The project would eliminate 4 existing exceedances of the pedestrian comfort criterion and add 7 new exceedances while 5 of the existing exceedances would continue.

Wind Hazard Conditions

The Code's wind hazard criterion is not currently exceeded at any of the 29 test locations, although prior testing indicates that wind hazard exceedances should be expected in the vicinity. With the project and landscaping, the Code's wind hazard criterion would not be exceeded at any of the same locations..

Project Mitigation Measures

A net of three new pedestrian-comfort criterion exceedances would be caused by the Project. The proposed addition of the large street trees along the sidewalks would reduce wind speeds that would occur in pedestrian areas, however this landscaping would not necessarily provide sufficient wind speed reductions to eliminate the new and existing exceedances of the pedestrian-comfort criterion.

As proposed, the project would not create a new hazard criterion exceedance.

Given the existing windy conditions of the site and vicinity and the modest changes in wind conditions that can reasonably be expected from the project, it may not be possible to design any structure that fully meets the goals of the project and that fully reduces ambient wind speeds to meet Section 148 comfort criteria at all locations.

Appendix C

Intersection Level of Service Designations

APPENDIX C

INTERSECTION LEVEL OF SERVICE DESIGNATIONS

Existing and future traffic conditions at signalized intersections within the primary study area have been evaluated using the TRAF-NETSIM Traffic Simulation Model. Conditions at signalized intersections in the secondary study area have been evaluated using the *1985 Highway Capacity Manual* (Transportation Research Board, 1985) operations methodology. Both methodologies use the concept of Level of Service (LOS), which, for signalized intersections, is defined in terms of delay, or waiting time at a signal. Delay is a measure of driver discomfort, frustration, fuel consumption, and lost travel time. Intersection LOS, determined according to the vehicle delay in seconds per vehicle, range from LOS A (very low delay) to LOS F (forced flow). Table C-1 (page A.46) provides more detailed descriptions of the six LOS, A through F, for signalized intersections using the *1985 Highway Capacity Manual* method. The TRAF-NETSIM simulation calculates LOS in much the same way, with similar results, but refines the analysis based on signal progression along streets, such as the Embarcadero, and based on spill-back, when queues from one intersection extend back to a previous intersection.

In the past, for planning applications, the City of San Francisco has used a slightly different methodology than the TRAF-NETSIM or *1985 Highway Capacity Manual* to analyze operations at signalized intersections. That method, known as the *Critical Lane Analysis* (Transportation Research Circular Number 212, Transportation Research Board, 1980), determines the ratio of critical opposing traffic volumes to theoretical intersection capacity, yielding the volume-to-capacity (v/c) ratio. Intersection LOS, determined according to the value of the v/c ratio, range from LOS A (free flowing condition) to LOS F (severely congested conditions). Table C-2 (page A.47) provides more detailed descriptions of the six LOS, A through F, for signalized intersections using the *Critical Lane Analysis* methodology.

TABLE C-1
SIGNALIZED INTERSECTION LEVEL OF SERVICE DEFINITIONS BASED ON DELAY

LEVEL OF SERVICE	TYPICAL DELAY (SEC/VEH)	TYPICAL TRAFFIC CONDITION
A	≤ 5.0	Insignificant Delays: No approach phase is fully utilized and no vehicle waits longer than one red indication.
B	5.1 - 15.0	Minimal Delays: an occasional approach phase is fully utilized. Drivers begin to feel restricted.
C	15.1 - 25.0	Acceptable Delays: Major approach phase may become fully utilized. Most drivers feel somewhat restricted.
D	25.1 - 40.0	Tolerable Delays: Drivers may wait through more than one red indication. Queues may develop but dissipate rapidly, without excessive delays.
E	40.1 - 60.0	Significant Delays: Conditions are generally the limit of acceptable delays. Vehicles may wait through several signal cycles and long queues of vehicles from upstream.
F	> 60.0	Excessive Delays: Represents unacceptable conditions with extremely long delays. Queues may block upstream intersections.

Sources: *Highway Capacity Manual*, Highway Research Board, Special Report No. 209, Washington, D.C., 1985; *Interim Materials on Highway Capacity*, Circular 212, Transportation Research Board, 1980; Korve Engineering.

TABLE C-2
ARTERIAL LEVEL OF SERVICE DEFINITIONS BASED ON TRAVEL SPEED

ARTERIAL CLASS	I	II	III
RANGE OF FREE FLOW SPEEDS (mph)	45 to 35	35 to 30	35 to 25
TYPICAL FREE FLOW SPEED (mph)	40	35	27
LEVEL OF SERVICE	AVERAGE TRAVEL SPEED (mph)		
A	≥ 35	≥ 30	≥ 25
B	≥ 28	≥ 24	≥ 19
C	≥ 22	≥ 18	≥ 13
D	≥ 17	≥ 14	≥ 9
E	≥ 13	≥ 10	≥ 7
F	< 13	< 10	< 7

Level of Service A:	Primarily free-flow operations at average travel speeds, usually about 90 percent of the free flow speed for the arterial class. Vehicles are completely unimpeded in their ability to maneuver within the traffic stream. Stopped delay at signalized intersections is minimal.
Level of Service B:	Reasonably unimpeded operations at average travel speeds, usually about 70 percent of the free flow speed for the arterial class. The ability to maneuver within the traffic stream is only slightly restricted and stopped delays are not bothersome. Drivers are not generally subjected to appreciable tension.
Level of Service C:	Stable operations. However, ability to maneuver and change lanes in mid-block locations may be more restricted than in LOS B, and longer queues and/or adverse signal coordination may contribute to lower average travel speeds of about 50 percent of the average free flow speed for the arterial class. Motorists will experience an appreciable tension while driving.
Level of Service D:	Borders on a range on which small increases in flow may cause substantial increases in approach delay and, hence, decreases in arterial speed. This may be due to adverse signal progression, inappropriate signal timing, high volumes, or some combination of these. Average travel speeds are about 40 percent of free flow speed.
Level of Service E:	Significant approach delays and average travel speeds of one-third the free flow speed or lower. Such operations are caused by some combination of adverse progression, high signal density, extensive queuing at critical intersections, and inappropriate signal timing.
Level of Service F:	Extremely low speeds below one-third to one-quarter of the free flow speed. Intersection congestion is likely at critical signalized locations, with high approach delays resulting. Adverse progression is frequently a contributor to this condition.

Source: Highway Capacity Manual, Special Report 209, Transportation Research Board, 1980.

Although the two methodologies for calculating the LOS differ, there is usually a good correlation between the LOS calculated using either method of analysis. It is only when high levels of congestion occur that differences between the two methodologies may be more apparent. As an example, using the *1985 Highway Capacity Manual* methodology, an intersection may be operating at a LOS F, with poor traffic progression, many signal cycle failures and vehicle delays above 60 seconds per vehicle; however, the v/c ratio could be below one, which would mean a LOS E using the *Critical Lane Analysis* methodology. Conversely, using the *1985 Highway Capacity Manual* methodology, an intersection may be operating at LOS D, with an efficient signal progression handling large traffic volumes; however, the v/c ratio could be above 0.9, which would mean a LOS E using the *Critical Lane Analysis* methodology.

Appendix D

San Francisco Air Pollutant Summary

APPENDIX D
SAN FRANCISCO AIR POLLUTANT SUMMARY, 1997-2000

Pollutant	Standard	Monitoring Data by Year ¹			
		1997	1998	1999	2000
Ozone					
Highest 1-hr average, ppm	0.09 ³	0.07	0.05	0.08	0.06
Number of standard excesses		0	0	0	0
Highest 8-hr average, ppm	0.08	0.06	0.05	0.06	0.04
Number of standard excesses		0	0	0	0
Carbon Monoxide					
Highest 8-hr average, ppm	9.0 ³	3.5	4.0	3.7	2.5
Number of standard excesses		0	0	0	0
Nitrogen Dioxide					
Highest 1-hr average, ppm	0.25 ³	0.07	0.08	0.10	0.07
Number of standard excesses		0	0	0	0
Sulfur Dioxide					
Highest 1-hr average, ppm	0.05 ⁴	0.003	0.005	0.007	0.006
Number of standard excesses		0	0	0	0
Particulate Matter (PM₁₀)					
Highest 24-hr average, µg/m ³	50 ³	81	52	78	53
Number of standard excesses		3	1	6	13
Annual Geometric Mean, µg/m ³	30 ³	22.5	20.2	22.6	20.7

Notes:¹ All data were collected at the Arkansas Street Station.² ppm = parts per million; µg/m³ = micrograms per cubic meter.³ State standard, not to be exceeded.⁴ State standard, not to be exceeded.

Source: California Air Resources Board, Aerometric Data Analysis & Management (ADAM), 2001.

Appendix E

Distribution List

APPENDIX E
DRAFT EIR DISTRIBUTION LIST

A. DRAFT EIR DISTRIBUTION LIST

FEDERAL AND STATE AGENCIES

State Office of Intergovernmental
Management
State Clearinghouse
1400 Tenth Street, Room 121
P.O. Box 3044
Sacramento, CA 95812-3044

California Department of Transportation
Office of Transportation Planning - B
P.O. Box 23660
Oakland, CA 94623-0660
Attn: Nandini N. Shridhar

REGIONAL AGENCIES

Association of Bay Area Governments
P.O. Box 2050
Oakland, CA 94604-2050
Attn: Suzan Ryder

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